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ABSTRACT

This executive summary describes the communication/language objectives-based system (C/LOBS) developed to support the front-end analysis efforts of the Defense Language Institute Foreign Language Center. The C/LOBS functions as a subsystem of the instructional systems development (ISD) approach currently in use in the TRADOC school system. The task assigned to this project, which is described in 13 volumes, was to develop a systematic set of procedures for determining terminal skill objectives (TSOs) and their supporting enabling objectives (EOs) for foreign language training within the ISD framework. This system must be capable of determining the TSOs and EOs for any job/duty position in any language. Five job/duty positions and three languages were selected for field testing and system validation. The languages are Iberian Spanish, Russian, and Mandarin Chinese; the five job/duty positions are: 11B infantryman, special forces (Russian); 11BF1 operations/intelligence specialist, special forces (Chinese); 91B medical specialist, special forces (Russian); 05B radio specialist, special forces (Russian); and military advisory and assistance group officers, Air Force (Spanish). Three phases were developed for the C/LOBS: (1) the task analysis phase; (2) the TSO conversion phase; and (3) the EC phase. (SW)

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METHOD FOR DETERMINING LANGUAGE OBJECTIVES AND CRITERIA

EXECUTIVE SUMMARY

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25 May 1979

FINAL REPORT OF RECOMMENDATIONS

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TABLE OF CONTENTS

INTRODUCTION

Mission Statement.....	E-1
Project Overview.....	E-1
Rationale for C/LOBS.....	E-2
Organization.....	E-2
Organization: Report of Recommendations.....	E-3
Task 1.0 Job/Duty Positions and Languages.....	E-7
Job /Duty Positions.....	E-7
Languages.....	E-7
Task 2.0 The Task Analysis System.....	E-7
Task Analysis System.....	E-10
The Preparation Stage.....	E-10
The Data Collection Stage.....	E-10
The Analysis Stage.....	E-11
Methodology.....	E-11
Data Control Algorithm.....	E-11
Procedures.....	E-12
Tools.....	E-13
Output.....	E-13
Task 3.0 TSO Conversion Routine.....	E-16
TSO Conversion.....	E-16
Language Functions.....	E-18
Methodology, Procedures, Tools and Output.....	E-21
Task 4.0 Enabling Objectives.....	E-32
EO System.....	E-32
Communications Analysis Stage.....	E-33
Language Analysis Stage.....	E-37
Synthesis Stage.....	E-41
Methodology and Procedures.....	E-41
Tools.....	E-42
Operational Definitions.....	E-42
Functions Catalog.....	E-43
Output of the EO System.....	E-45
Cycle of Fidelity.....	E-51
Recommendations.....	E-54
Selected Bibliography.....	E-61
Appendix A: Initial Listing of Descriptors of Communicative Activities	E-63

LIST OF FIGURES

Figure 1: Task Analysis Design.....	E-8, E-9
Figure 2: Array Job Search Data.....	E-12
Figure 3: Task Statement Design.....	E-14
Figure 4: Training Task Analysis Design.....	E-17
Figure 5: Language and Communication Analysis Design.....	E-34, E-35
Figure 6: Breakdown of Communicative Activities Requiring Speaking/ Listening Skills	E-38, E-39
Figure 7: From Operational Definitions to Elements in the Functions Catalog	E-44
Figure 8: TSO Map 11BSF C.7.02 RU.....	E-46
Figure 9: Cycle of Fidelity.....	E-53

INTRODUCTION

This executive summary describes the communication/language objectives-based system (C/LOBS)* developed to support the front-end analysis efforts of the DLIFLC. The C/LOBS functions as a subsystem of the ISD approach currently in use in the TRADOC school system. It is congruent with the principles set forth in the Interservice Procedures for Instructional Systems Development (TRADOC Pam 350-30).

Mission Statement

The task assigned to this project was to develop a systematic set of procedures for determining Terminal Skill Objectives (TSOs) and their supporting Enabling Objectives (EOs) for foreign language training within the ISD framework. This system must be capable of determining the TSOs and EOs for any job/duty position in any language. It must be compatible with TRADOC school guidelines, cost-effective, generalizable, and performance oriented.

Project Overview

The project covered the period 1 October 1977 to 30 June 1979. Five job/duty positions and three languages were selected for field testing and system validation. Three phases were developed for the C/LOBS: (1) the task analysis phase; (2) the TSO conversion phase and (3) the EO phase. Job and task analysis was conducted through on-site interviews with MOS holders, interviews with high level decision makers, observation, and follow-up surveys. Validation of all analyses, instruments, procedures, and objectives was done both with User Agency personnel and with DLIFLC faculty, task analysts, course developers, and evaluators.

*C/LOBS is pronounced "See-Lobs".

Rationale for C/LOBS

In an educational setting, language objectives-based systems (LOBS) provide sufficient focus to permit the development of general language-learning curricula. In a training environment, where job relevance and task specificity are paramount, the functional purposes of language are critical factors. These purposes are discovered through an analysis of the communicative needs of the job holder. The front-end system must determine the communicative requirements as well as the language requirements of a job. Only from an analysis of the combined elements of communication and language can adequate training be derived. Therefore, the present system gives attention to both the communicative strategies and the linguistic elements necessary for job performance.

Organization

The completion of five major tasks was required to develop the C/LOBS. They were:

- Task 1.0 Determine the five job/duty positions and three languages for field testing and validation
- Task 2.0 Develop the task analysis system
- Task 3.0 Develop the TSO conversion routine
- Task 4.0 Develop the EO system
- Task 5.0 Produce a Report of Recommendations sufficient to provide guidance in implementing, conducting, and monitoring the C/LOBS

Tasks 2.0, 3.0, and 4.0 represent the heart of the project. In this executive summary, they are discussed in terms of the systems, methodologies, algorithms, procedures, and tools required to accomplish the analysis. In the discussion of Task 4.0, the breakdown of communicative activities and the functional-notional approach to language are described according to the way they are used in the C/LOBS, rather than according to the theoretical assumptions underlying the approach.

Report of Recommendations: Organization

The results of the accomplishment of Tasks One through Five are presented in the thirteen numbered volumes of the Report of Recommendations.

Volume I

Title: A Communication/Language Objectives-Based System (C/LOBS) for Foreign Language Training.

Contents: Describes the project requirements and how the C/LOB system fulfills them. Includes descriptions of (1) task analysis design and methodology and (2) organization and methodology for the determination of terminal and enabling objectives.

Primary Audience: DLI management personnel, task analysts, TRADOC personnel, User Agency management personnel.

Prior Knowledge Assumed: Familiarity with IPISD

Volume II

Title: Methodological Tools: Computer Analysis, Data Collection Instruments

Contents: Presents samples of instruments used to collect language performance data from job holders for task analysis. Includes interview, observation and survey instruments. Also describes methods for computer and hand analysis of numerical language performance data.

Primary Audience: Task analysts, User Agency personnel (as reference guide)

Prior Knowledge Assumed: Familiarity with IPISD helpful, not required.

Volume III

Title: Conceptual Tools: Functional System, List of Functions, Operational Definitions of Functions.

Contents: Narrative explanation of Functional System, list of language functions used in project, operational definitions (include examples) for each function.

Primary Audience: Task analysts, DLI management personnel, course developers.

Prior Knowledge Assumed: None

Volume IV

Title: English Function Catalog and Rolebooks

Contents: Presents examples of components described in Volumes I and III. Contains function catalog for American English; includes sentences, phrases and patterns used to express each function. Also contains six English rolebooks with utterances for three functional categories in three conversational modes.

Primary Audience: Any reader not familiar with one of the three project languages (Russian, Chinese, Spanish). Task analysts, DLI management personnel, User Agency management personnel, TRADOC personnel, course developers.

Prior Knowledge Assumed: None

Volume V

Title: MAAG Job Position (Iberian Spanish)

Contents: Terminal Skill Objectives, Mapping Sheets, and Enabling Objectives for the MAAG Job Position as performed in Iberian Spanish.

Primary Audience: Task analysts, User Agency personnel, course developers.

Prior Knowledge Assumed: Reading knowledge of Spanish very helpful, not required.

Volume VI

Title: Iberian Spanish Function Catalog

Contents: Presents Iberian Spanish language elements (sentences, phrases, patterns) organized by language functions, functional categories.

Primary Audience: Task analysts, User Agency personnel, course developers.

Prior Knowledge Assumed: Reading knowledge of Spanish required.

Volume VII

Title: MAAG Job Position: Rolebooks and Technical Vocabulary (Iberian Spanish)

Contents: Presents rolebooks in Spanish for the four roles required for the job position. Also includes technical vocabulary for the MAAG job position in English and Spanish.

Primary Audience: Task analysts, User Agency personnel, course developers.

Prior Knowledge Assumed: Reading knowledge of Spanish required.

Volume VIII

Title: 11BF1 Operations/Intelligence Specialist Special Forces (Mandarin Chinese)

Contents: Presents Terminal Skill Objectives, Mapping Sheets and Enabling Objectives for MOS 11BF1 as performed in Mandarin Chinese.

Primary Audience: Task analysts, User Agency personnel, course developers.

Prior Knowledge Assumed: Reading knowledge of Chinese helpful, not required.

Volume IX

Title: Mandarin Chinese Function Catalog and Rolebook

Contents: Presents Mandarin Chinese language elements (sentences, phrases, patterns) organized by language functions, functional categories. Also presents rolebook required for MOS in Chinese.

Primary Audience: Task analysts, User Agency personnel, course developers.

Prior Knowledge Assumed: Reading knowledge of Chinese required.

Volume X

Title: 91B Medical Specialist Special Forces (Russian)

Contents: Presents Terminal Skill Objectives, Mapping Sheets and Enabling Objectives for the MOS 91B as performed in Russian.

Primary Audience: Task analysts, User Agency personnel, course developers.

Prior Knowledge Assumed: Reading knowledge of Russian helpful, not required.

Volume XI

Title: 11B Infantryman Special Forces (Russian)

Contents: Presents Terminal Skill Objectives, Mapping Sheets and Enabling Objectives for the MOS 11B as performed in Russian.

Primary Audience: Task analysts, User Agency personnel, course developers.

Prior Knowledge Assumed: Reading knowledge of Russian helpful, not required.

Volume XII

Title: 05B Radio Specialist Special Forces (Russian)

Contents: Presents the Terminal Skill Objectives, Mapping Sheets, and Enabling Objectives for MOS 05B as performed in Russian.

Primary Audience: Task analysts, User Agency personnel, course developers.

Prior Knowledge Assumed: Reading knowledge of Russian helpful, not required.

Volume XIII

Title: Russian Function Catalog and Rolebooks

Contents: Presents Russian language elements (sentences, phrases, patterns) organized by language functions, functional categories. Also presents two rolebooks required for MOS in Russian.

Primary Audience: Task analysts, User Agency personnel, course developers.

Prior Knowledge Assumed: Reading knowledge of Russian required.

Task 1.0: JOB/DUTY POSITIONS AND LANGUAGES

Job/Duty Positions

Five job/duty positions were selected for field testing and validation of the C/LOBS. The criteria for selection were an emphasis on speaking skills, criticality to U.S. military operations, variety of job types, and availability.

The five job/duty positions were:

- 11B Infantryman, Special Forces. (Russian)
- 11BF1 Operations/Intelligence Specialist, Special Forces. (Chinese)
- 91B Medical Specialist, Special Forces. (Russian)
- 05B Radio Specialist, Special Forces. (Russian)
- Military Advisory and Assistance Group (MAAG) Officers, Air Force. (Spanish)

Jobholders performing the four Special Forces MOSs were located at FT BRAGG, North Carolina. The MOS holders came from the 5th and 7th Special Forces Groups. On-site validation also took place at the 10th Special Forces Group, FT DEVENS, Massachusetts. The MAAG officers were assigned to Madrid, Spain.

Languages

Three languages were selected for analysis: Iberian Spanish, Russian, and Mandarin Chinese. The criteria for selection were criticality, density, strategic importance, and variations among language types. Spanish, Russian, and Chinese represent a range of linguistic differences. Their strategic importance to the United States is obvious.

Task 2.0: THE TASK ANALYSIS SYSTEM

The task analysis system was designed to produce two pre-specified outputs: the quantitative data necessary to determine the critical and/or high frequency

TASK ANALYSIS DESIGN

E-8

DESIGN PARAMETERS (REQUIREMENTS)

TRAINING SYSTEM CONGRUENCE

- compatibility with DLIFLC school model
- compatibility with generic TRADOC school model
- consistency with principles reflected in the IPISD
- establishment of job tasks as the basic unit of analysis

TASK ANALYSIS OUTPUT RECIPIENTS

- Administrators/Managers
- Course Developers
- Evaluators/Test Developers
- Other Task Analysts
- User Agency decision makers

ANALYSTS' SKILLS AND KNOWLEDGES

Required

- knowledge of task analysis principles and procedures
- interview and observation skills
- knowledge of TRADOC school model
- knowledge of IPISD operations and procedures

TASK ANALYSIS SYSTEM (STAGES/FUNCTIONS)

PREPARATION STAGE

Identify MOS characteristics

- use or intended use of foreign language skills
- job requirements and setting

Identify data sources

- MOS job data location
 - persons
 - documents
- User Agency decision-making locations
 - persons
 - documents
- Expert opinion (outside the organization)
 - persons
 - documents

Review existing materials

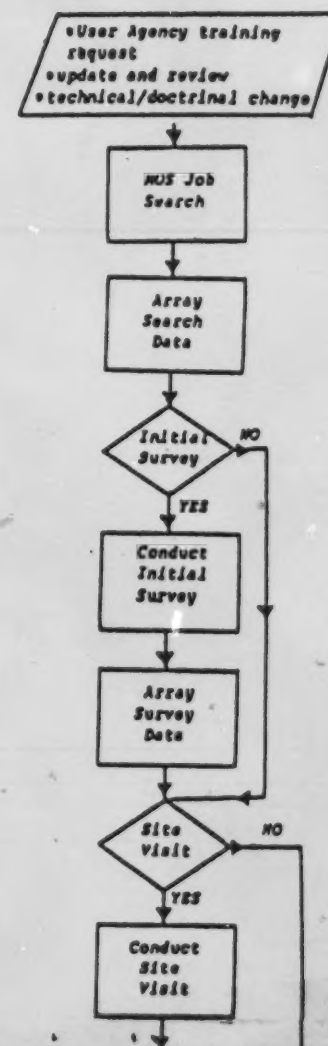
- MOS job descriptions
- field and technical manuals
- other task analyses
- training materials

DATA COLLECTION STAGE

Select data-control plan

- define the problem for administrative decision makers
- present options

TASK ANALYSIS METHODOLOGY (DATA CONTROL ALGORITHM)



15
Figure 1:

Supplemental (not required)

- *knowledge of the target language
- *computer programming skills
- *skill in linguistic analysis
- *skill with inferential statistics
- *prior target MOS knowledge

DATA TRACKING AND CONTROL

- *focuses on output categories and data types within categories
- *provides data-gathering algorithm (software component) that:
 - *guides the analysts' procedures to insure necessity and sufficiency of data
 - *provides decision points for selecting data tracks given a defined purpose or requirement, a specific time, specified resources, and User Agency constraints
 - *lists procedures, the human operations, for each data-operation block in the Task Analysis algorithm
 - *provides generalized interview, observation, and initial survey instruments (hardware component) for sorting input into appropriate output categories

OUTPUT CONTROL

- *prespecified output: categories, data types, and formats are predetermined with respect to recipient needs
- *format for communicative tasks, conditions, and performance indices is CONSTANT
- *content for communicative tasks, conditions, and performance indices is VARIABLE
- *priority tasks are determined with numeric data

16

- *recommendation for data gathering
- *determine time, resource, and User Agency constraints

Review instruments

- *review instruments
- *modify or change according to decisions resulting from the selected data-control plan

Collect data

- *carry out strategies, i.e., initial survey, interview, observation
- *array and analyze for sufficiency
- *carry out follow-up as required

ANALYSIS STAGEAnalyze data

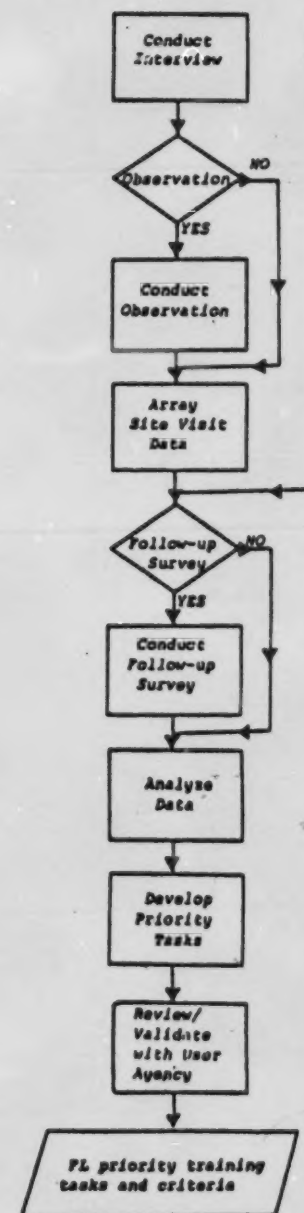
- *analyze data according to prespecified output
- *determine priority tasks, conditions, and performance

Validate/Review with User Agency personnel

- *submit to User Agency
- *make changes or modifications as required

Determine Terminal Skill Objectives

- *determine TSOs
- *provide all documentation
- *provide language functions and vocabulary needs for TSOs
- *deliver to linguists/analysts/developers as required



17

tasks using the target language and sufficient qualitative data to convert those tasks to TSOs. The system design also ensured fidelity to TRADOC guidelines, the DLIFLC school model, and the expected capabilities of task analysts who are not SMEs (subject matter experts) or native speakers of the target languages. This type of system permits the greatest flexibility for using key personnel irrespective of MOS (Military Occupational Specialty) knowledge or target language fluency.

Task Analysis System

The task analysis stage is made up of three stages: (1) preparation stage; (2) data collection stage; and (3) analysis stage. Figure 1 (pp. E.8,9) lays out the task analysis model with its design parameters, system stages, and methodology.

The Preparation Stage. In the preparation stage, the analyst identifies the MOS characteristics, identifies data sources, and reviews existing materials. The MOS characteristics include the use of language skills, job setting, and performance environment. Data sources are the persons and documents relevant to the MOS holders, the User Agency decision-makers, and expert opinions from outside the organization. The review of existing materials entails the job descriptions, field and technical manuals, prior task analyses, and training materials associated with the target MOS and target language.

The Data Collection Stage. In the data collection stage, the analyst selects a data-control plan, reviews the data gathering instruments, and collects the data. The data-control plan defines the problem, develops options, and provides recommendations for data collection based on time, allocated resources, and User Agency constraints. The data gathering instruments for survey, interview, and

observation are reviewed and modified according to the data-control plan. Data are then collected.

The Analysis Stage. In the analysis stage, the analyst arrays the data, validates the results with the User Agency for adequacy, sufficiency, and accuracy, and determines the priority training tasks. The job tasks are tentatively assigned as training tasks. They are developed as TSOs. The precise operations for defining the TSOs are covered in the next section (Task 3.0).

Methodology

The task analysis methodology is made up of three components: (1) the data control algorithm, (2) the procedures, and (3) the tools necessary to carry out the procedures governed by the data-control algorithm.

Data control algorithm. The data control algorithm breaks down the task analysis stages and functions into a logical flow of information. The function of the algorithm is to monitor the identification, collection, movement, and transformation of data from input to prespecified output format. This is the quality control mechanism.

The "diamonds" in the algorithm identify key decision points for the manager. The algorithm aids the manager in making these decisions by describing the preceding events, the decision types, and the operations that follow as a result of any decision. Inherent in all of these management decisions are feasibility and time/quality ratios. For example, the first decision is whether or not to conduct an initial survey. The manager must ask: "What are the costs in dollars and time? What do we gain? What do we lose?" The manager can proceed through the algorithm and see what actions would take place as a result of this decision. Consequently, the manager is in a better position to determine what

information or evidence is required for optimal decision making.

The "rectangles" represent the operations blocks of the algorithm. Each operations block guides the human operations required to carry out the movement or transformation of data through the system.

Procedures. The human operations governed by the algorithm are the procedures. For example, the operations block ARRAY JOB SEARCH DATA has the following procedures:

Figure 2: ARRAY JOB SEARCH DATA



Procedures

- prepare summary of language-related job tasks for (each) MOS
- array sections of field manual affected by doctrinal change
- array sections of field manuals, technical and training materials which pertain to language requirement
- prepare list of local personnel available to serve as MOS consultants

Comment:

"We found that the very act of xeroxing the appropriate sections of the manuals, making the list of people, and in general just getting everything we knew about the MOS together in one place helped clarify our thinking about the job requirement."

Such procedures have been developed for operations in the data control algorithms supporting the task analysis system, the TSO Conversion Routine, and the EO system.

Tools. The tools required for the task analysis system are the interview instruments, the survey instruments, the statistical techniques, and the observation checklists. These tools are found in Volume II. Tools must be developed for every task analysis. These would include such things as modified versions of existing worksheets, checklists, prior task analyses and so on. The primary tools, the interview, survey, and observation instruments, are based on the types of input, the data control algorithm, prespecified output categories, and the requirements for conducting the analysis, i.e., the procedural steps.

The tools provide for the arrangement of the quantitative data required for determining frequency and criticality indices and for the careful identification, logging, tracking, and arranging of qualitative data for adequate and sufficient training information.

Output

The output of the task analysis is the critical and raw data that are to be transformed into training tasks through the TSO conversion routine. Each training task consists of tasks, conditions, and standards in a prespecified output format. Prespecified and explicit descriptions of each task are maintained by a list of behaviorally defined verbs. The twenty-five behaviors used in this system are constitutionally defined in Appendix A. Figure 3 (pp. E.14, 15) shows the prespecified format and content categories of the task analysis output.

The categorical use of each behavioral verb is shown in blocks of communicative activities. The operational use of the verbs is given in Task 4.0 (pp. E.32-50)

Each communicative task statement consists of the following: (1) identification of the job holder; (2) role identification; (3) the communicative activity; (4) priority topics listing; (5) and purpose of the job task. The communicative

TASK STATEMENT DESIGN

E-14

COMMUNICATIVE TASK STATEMENT FORMAT

(MOS holder), as a (role identification), (communicative activity) for/with/to (audience identification)
 on (topics listing) for the purpose of (job/task statement).

EXAMPLE OF A COMMUNICATIVE TASK STATEMENT

The 91B MOS holder, as an instructor, demonstrates through the Russian language, to civilian personnel medical procedures for: (1) clearing air passages; (2) stopping bleeding; (3) treating for shock; and (4) protecting wounds, for the purpose of instructing trainees in basic medical skills. (Interview and survey data from 91B MOS holders.)

COMMUNICATIVE TASK STATEMENT COMPONENTS

<u>MOS Holder</u> 1	+	<u>Communicative Activity</u> 2	+	<u>Audience Characteristics</u> 3	+	<u>Topics</u> 4	+	<u>Job/Task Statement</u> 5
(Identification of the MOS, duty position, or job title, together with a role descriptor when applicable.)		• briefs • converses • corresponds • demonstrates • facilitates • gists • informs • interprets • interrogates • interviews • lectures • monitors • narrates • notes • prepares memoranda		• individual • group • both • military • civilian • both Speaks: • TL only • TL & English • TL or English • English only (TL=target language)		List of topics that are critical to the mission, frequently used, and difficult to learn.		(Statement of the actual job/task(s) that the communicative activity supports and the job/task documentation source.) For example, • soldier's manual • job description • User Agency decision makers

- prepares reports
- reviews
- scans
- takes dictation
- teaches
- telephones
- transcribes
- translates

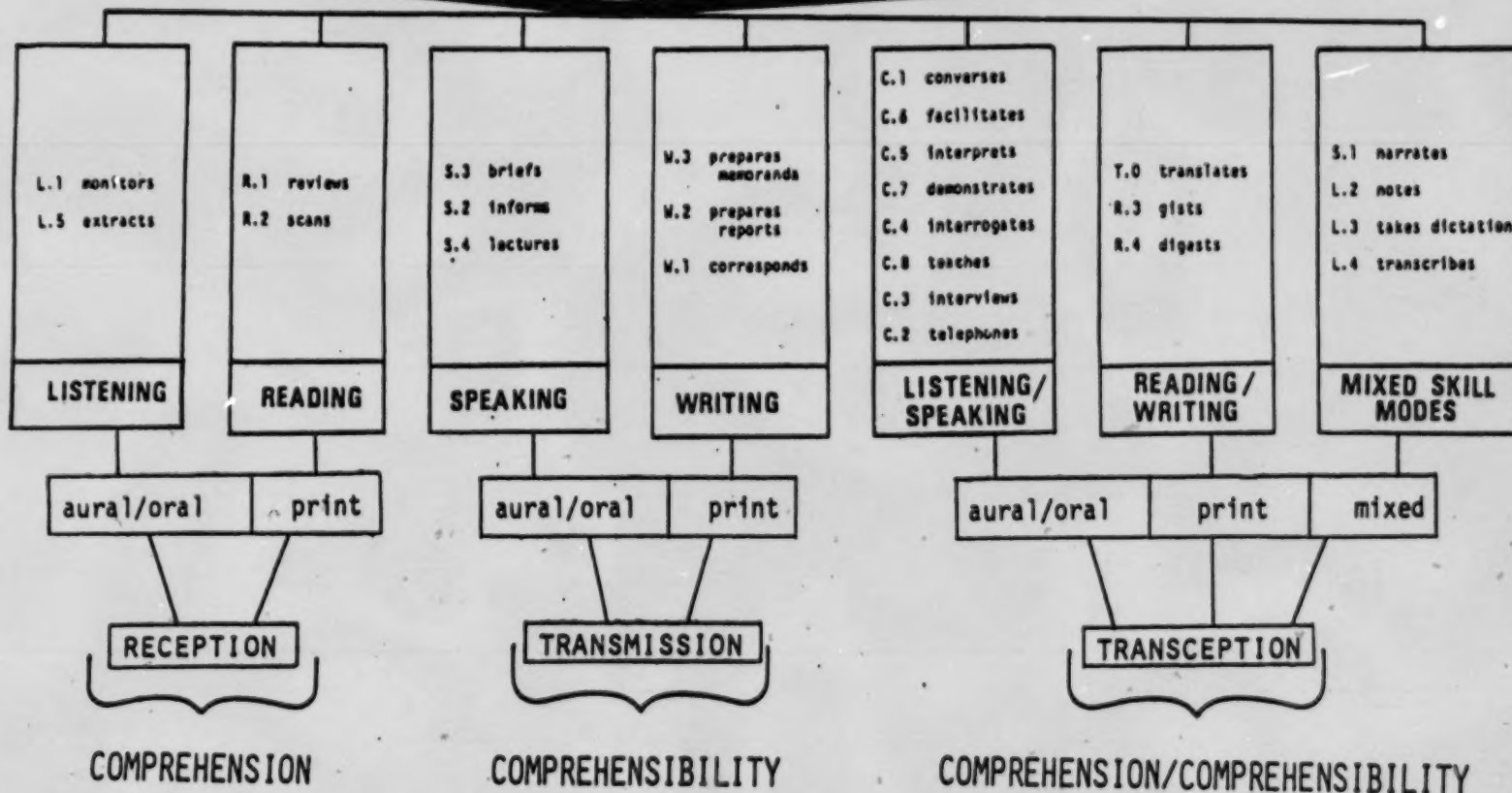
COMMUNICATIVE
ACTIVITY
VERBS
(with
communicative
task identity
number)

REQUIRED
COMMUNICATIVE
SKILL

COMMUNICATION
MEDIUM

COMMUNICATION
DIRECTION

PERFORMANCE
TESTING TYPE



activity is always defined by one of the twenty-five behavioral verbs through which listening, speaking, reading, and/or writing are exhibited.

The content categories in Figure 3 show the impact or importance of the output for a variety of audiences, e.g., test developers, instructional developers, managers, administrators, and evaluators. It provides for levels of conceptualization from broad, general skills, to specific, single-task communication.

Task 3.0: TSO CONVERSION ROUTINE

Terminal Skill Objectives (TSOs) are directly derived from the Job Task Worksheets of the priority tasks. Although the TSOs resemble Job Task Worksheets, there are significant differences.

JOB TASK WORKSHEETS

- emphasis on job conduct
- states job standards
- states job conditions

TERMINAL SKILL OBJECTIVES

- emphasis on training
- develops Language Performance Measures
- describes training conditions

This shift of emphasis, requirement, and purpose from job to training is handled by the TSO Conversion Routine. The purpose of the TSO Conversion Routine is to ensure that: (1) job task data are accurately converted to training data; (2) Language Performance Measures (LPMs) are defined in terms of indices needed by CRT developers; and (3) the initial training standards and conditions have descriptive guidelines adequate to focus the training development process.

TSO Conversion

The TSO Conversion Routine is described in Figure 4 (p. E.17). The conversion stage changes job to training task, analyzes performance for the LPMs, and

TRAINING TASK ANALYSIS DESIGN

DESIGN PARAMETERS (Requirements)

- The same requirements exist for the Training Task Analysis Design as for the Job Task Analysis. Emphasis is on:
- training system congruence
 - output recipients
 - analysts skills & knowledges
 - data tracking & control
 - prespecified output
 - prespecified formats

TSO CONVERSION ROUTINE (Single Stage)

CONVERSION STAGE

Transform job to training task

Training task statement

Training task components

- role
- communicative activity
- audience
- topics
- purpose
- documentation

Analyze for performance

Language Performance Measures

- vocabulary indices
- functions indices

MacroStandards

- performance description
- functions categories
- vocabulary type

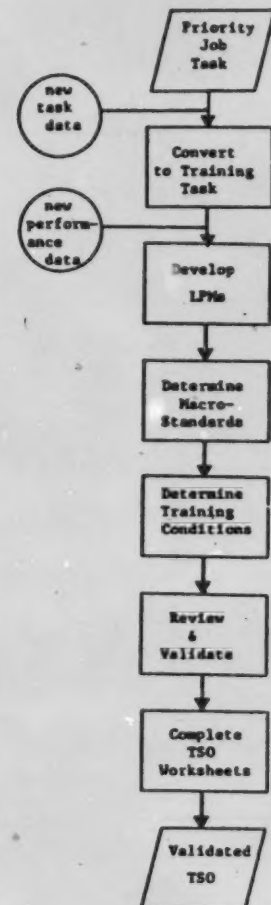
Determine training conditions

Preparation time & materials

Performance time & materials

Linguistic register

TSO METHODOLOGY (Data Control Algorithm)



determines the training conditions. After adjusting the job task to a training task, the performance analysis takes place. This analysis determines the performance parameters for the LPMs. These performance indices are the specialized vocabulary and the functions indices. Specialized vocabulary is difficult to obtain in a practical sense. It has a technical or situationally specific context. Consequently, general dictionaries and basic language courses do not meet these unique needs. Since a major portion of job communication relies on these words, special techniques for document search and native-expert interviews are used throughout the procedures for the task analysis phase, the TSO phase, and the EO phase.

The language functions provide the grammatico-syntactic patterns or structures necessary to communicate in a job setting with common as well as specialized vocabulary. The functions used in the C/LQBS are tentative. That is, functions can be changed according to the needs of the MOS holder. New functions can be added. Existing functions can be changed or deleted. The utility of the functional approach is discussed more fully in Task 4.0, Enabling Objectives, in the subsection, Language Analysis Stage (pp. E.31-41). The functions used in this project are:

1.0 SEEK AND IMPART FACTUAL INFORMATION

- 1.1 identify objects, persons, processes
- 1.2 state factual information
- 1.3 seek factual information

2.0 REPORT, EXPRESS OR INQUIRE ABOUT INTELLECTUAL ATTITUDES

- 2.1.1 agreement
- 2.1.2 disagreement
- 2.2.1 an offer
- 2.2.2 declining an offer
- 2.2.3 accepting an offer
- 2.3.1 remembering
- 2.3.2 forgetting

- 2.4.1 possibility
- 2.4.2 impossibility
- 2.5.1 capability
- 2.5.2 incapability
- 2.6 need
- 2.7.1 certainty
- 2.7.2 uncertainty
- 2.8 obligation
- 2.9.1 request for permission
- 2.9.2 granting of permission
- 2.9.3 denial of permission
- 2.10.1 denial
- 2.10.2 affirmation/confirmation
- 2.11 awareness
- 2.12.1 difficulty
- 2.12.2 ease
- 2.13 belief/opinion

3.0 REPORT, EXPRESS, OR INQUIRE ABOUT EMOTIONAL ATTITUDES

- 3.1.1 pleasure/liking
- 3.1.2 displeasure/dislike
- 3.2.1 satisfaction
- 3.2.2 dissatisfaction
- 3.3.1 fear
- 3.3.2 worry
- 3.4 hope
- 3.5 surprise
- 3.6 preference
- 3.7 intention
- 3.8 want
- 3.9.1 approval
- 3.9.2 disapproval
- 3.10.1 importance
- 3.10.2 unimportance/indifference
- 3.11 anticipation

4.0 REPORT, EXPRESS, OR INQUIRE ABOUT GETTING THINGS DONE (SUASION)

- 4.1 suggestions
- 4.2 requests
- 4.3 invitations
- 4.4 advice
- 4.5 warnings
- 4.6 directions/instructions/commands
- 4.7 corrections

5.0 ENGAGE IN SOCIAL RITUALS

- 5.1 greet
- 5.2 take leave

- 5.3 open conversation/engage in small talk with:
 - 5.3.1 a friend
 - 5.3.2 an acquaintance/peer
 - 5.3.3 an acquaintance/superior
 - 5.3.4 an acquaintance/subordinate
 - 5.3.5 a stranger/peer
 - 5.3.6 a stranger/superior
 - 5.3.7 a stranger/subordinate
- 5.4 end conversation
- 5.5.1 introduce
- 5.5.2 respond to introductions
- 5.6 begin/end a meal
- 5.7 propose a toast
- 5.8 express sympathy/empathy
- 5.9 express congratulations
- 5.10 express gratitude
- 5.11 express regret
- 5.12 express apology
- 5.13 strike a bargain
- 5.14.1 give gifts
- 5.14.2 receive gifts
- 5.15 tell jokes
- 5.16 telephone behavior
 - 5.16.1 answer
 - 5.16.2 respond to answer
 - 5.16.3 request to speak to someone or an extension
 - 5.16.4 respond to such request
 - 5.16.5 wrong number
 - 5.16.6 long distance
 - 5.16.7 hold
 - 5.16.8 messages
 - 5.16.9 end conversations
 - 5.16.10 take leave
- 5.17 give warnings/safety instructions
- 5.18 be hospitable

6.0 MANAGE COMMUNICATION

- 6.1.1 interrupt
- 6.1.2 acknowledge interruption
- 6.2 sequence communication
- 6.3 refocus and/or adjust communication
- 6.4 control speed
- 6.5 control volume
- 6.6 request repetition or offer to repeat
- 6.7 comment on or inquire about intelligibility
- 6.8.1 change topic
- 6.8.2 consent to change topic
- 6.8.3 refuse to change topic
- 6.9 request questions and/or comments
- 6.10 request or offer translation/explanation/clarification

Methodology, Procedures, Tools, and Output

Again, the methodology consists of a data-control algorithm and a set of procedures. These are laid out in detail in Volume I. The primary tool for the TSO Conversion Routine is the TSO Worksheets. These worksheets provide for the arrangement of the qualitative data that makes up the TSO.

The output is the TSOs. An example of a TSO is found on the following ten pages. This TSO is the training objective for demonstrating the care and use of the M60 Machinegun in Russian by an 11B Infantryman in the Special Forces. The TSO consists of four major sections:

- T.01: The cover page of the TSO with the communicative task, training conditions, and standards along with supporting documentation.
- T.02: One or more pages (an average of ten) of a task scenario in English, critical vocabulary in the target language, key language functions, and clarifying or additional information in the comments column.
- T.03: The language functions indices, i.e., a categorical listing of the language functions required to successfully perform the communicative task.
- T.04: The vocabulary indices, i.e., an alphabetical listing of the key vocabulary items necessary for communicative performance with their English equivalents.

Some TSOs total twenty pages or more. The specificity gained from these "expanded" objectives provides clear, explicit guidance for instructional developers.

TERMINAL SKILL OBJECTIVE

Page T.01

No. 11B.SF / C.7.02 / RUDOCUMENTATION: Interview/Survey Data: DLI Work Unit 35114Task Analysis, 10th SFG, Ft. DevensIMA SC 746D Military Handguns and RiflesSoldier's Manual 11B10; FM 23-67 Machinegun 7.62mm M60

COMMUNICATIVE TASK

COMPONENTS

Role Instructor

Com Act Demonstrates

Audience Group/Individual

Topics Machineguns

Purpose Training machinegunners

STATEMENT

The student in the role of "INSTRUCTOR" "DEMONSTRATES" to others in the Russian language in a face-to-face situation on a group or individual basis how to: (1) inspect, clean, and maintain the machinegun, (2) load, clear stoppages, and unload the machinegun, and (3) aim, fire, and hit the target for the purpose of training personnel in the use of the M60 and other machineguns.

CONDITIONS

PREPARATION TIME

3 hours

Materials/Equipment

dictionary, technical

terms, mock M60 or equivalent, & dummy ammo

PERFORMANCE TIME

30 min.

Materials/Equipment

1-5 persons acting as trainees, mock machinegun, and dummy ammo

REGISTER

<u>Speech</u>	<u>Print</u>
<u>— techno-jargon</u>	<u>— technical</u>
<u>— formal</u>	<u>— literary</u>
<u>x colloquial</u>	<u>— informal</u>

MacroSTANDARDS

DESCRIPTION The student will give a brief 10-minute lesson on inspecting and cleaning the machinegun; a brief lesson on loading, unloading, and firing.

The student will answer individual questions for 10 minutes for communicative competence based on T.03 and T.04.

LPM INDICES

Functions

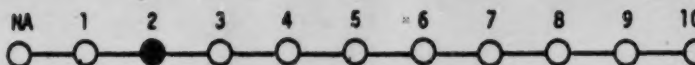
<u>x</u>	<u>1.0 Fact Info</u>
<u>x</u>	<u>2.0 Intell Att</u>
<u>—</u>	<u>3.0 Emo Att</u>
<u>x</u>	<u>4.0 Suasion</u>
<u>—</u>	<u>5.0 Soc Rit</u>
<u>—</u>	<u>6.0 Man Comm</u>

Vocabulary

<u>x</u>	<u>military</u>
<u>x</u>	<u>technical</u>
<u>—</u>	<u>other</u>
<u>—</u>	<u>See T.04</u>

TSO

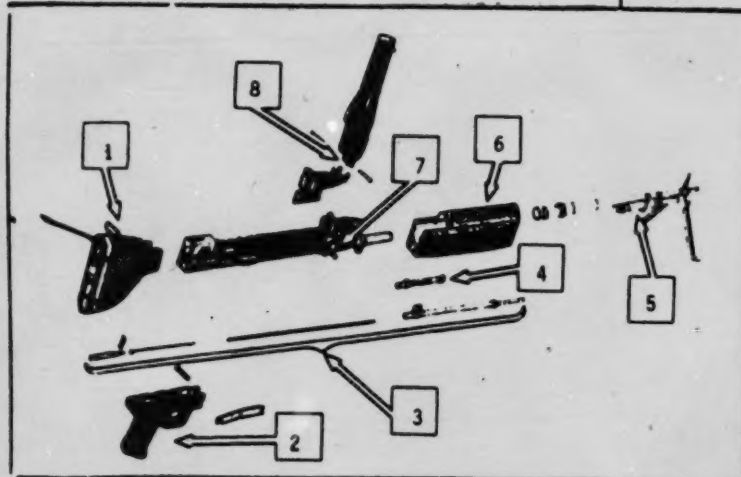
EO



TASK SCENARIO

KEY TERMS
Vocabulary ItemsFUNCTIONS
Major DescriptorsCOMMENTS
Culture/References/Supplements

The student will discuss the major components of the M60 Machinegun.



1. Stock
2. Trigger mechanism
3. Buffer and operating rod
4. Bolt
5. Barrel
6. Forearm
7. Receiver
8. Cover, tray, and hanger.

1. ложа
2. пусковой механизм
3. буфер и шток газового поршня
4. болт
5. ствол
6. целье
7. ствольная коробка
8. крышка, лоток, и серьга

1.1 Identify

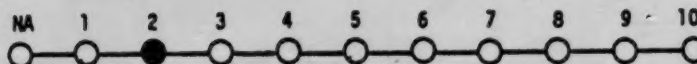
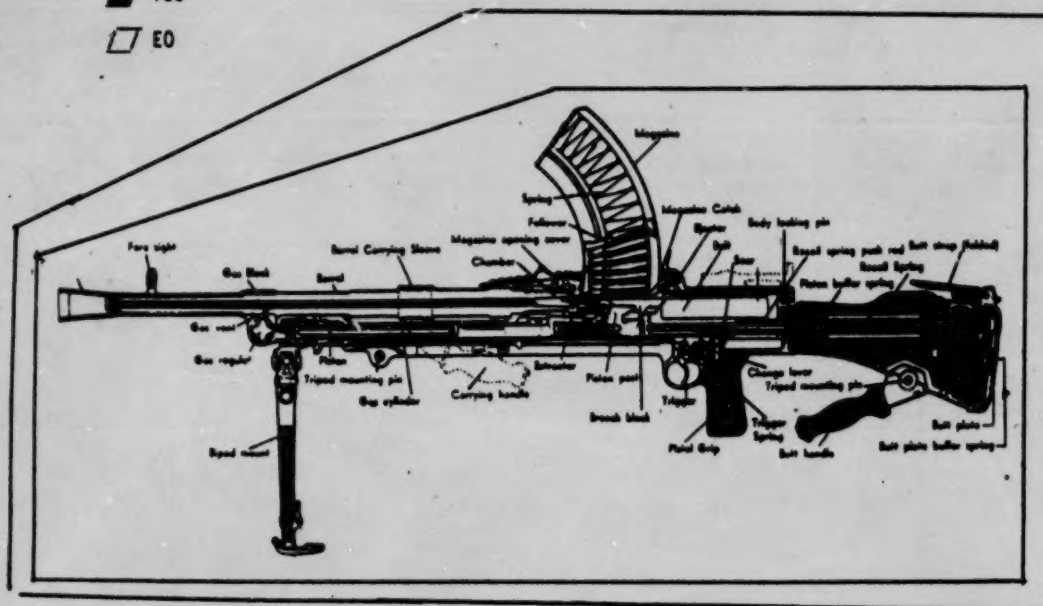
The illustration comes from the Lesson Administration Instructions of TEC Lesson #941-071-0078-F

The student must be able to explain technical terms or labels by providing simple definitions, giving examples and non-examples, and making comparisons.

TSO No. 11B.SF / C.7.02 / RU

TSO

EO

T.02
Page 2 of 6

14. Ejector- отражатель
15. Extractor-выбрасыватель
16. Follower- подаватель
17. Foresight- мушка
18. Gas block- газовая камера
19. Gas cylinder- газовый цилиндр
20. Gas regulator- газовый регулятор
21. Gas vent- газовое отверстие
22. Magazine- магазин
23. Magazine catch - защелка приемника
24. Magazine opening cover- крышка окна
25. Pistol grip - рукоятка пулемета
26. Piston - газовый поршень
27. Piston buffer spring- пружина амортизатора
28. Piston post- стойка штока поршня
29. Recoil spring- возвратно-боевая пружина
30. Recoil spring push rod- направляющая стержень
31. Sear- шептало
32. Spring- пружина
33. Trigger- спусковой крючок
34. Trigger spring - пружина спускового крючка
35. Tripod mounting pin- передний шворень крепления на треноги

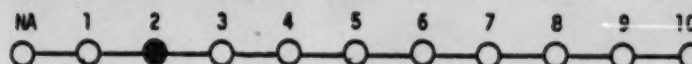
Illustration of a typical machinegun. From Military Handguns and Rifles,
page 5-80, IMA SC 746D
October 1974

1. Barrel-ствол
2. Barrel carrying sleeve - муфта рукоятки для переноски
3. Bipod mount- сошки
4. Body locking pin- чека ствольной коробки
5. Bolt - болт
6. Breech block- затвор
7. Butt handle - рукоятка приклада
8. Butt plate - затыльник
9. Butt plate buffer spring - амортизирующая пружина затыльника
10. Butt strap (folded)- откидная накладка плечевого упора
11. Carrying handle- рукоятка для переноски
12. Chamber- патронник
13. Charge lever- переводчик с автоматического огня на одиночный

Although these terms are not exhaustive, they represent the most useable group of labels for light weapons.

TSO

EO

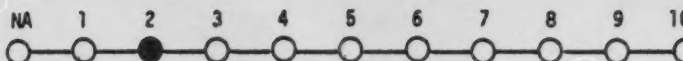


TASK SCENARIO	KEY TERMS Vocabulary Items	FUNCTIONS Major Descriptors	COMMENTS Culture/References/Supplements
<u>The M60 Machinegun</u> The student will instruct others in the disassembly and cleaning of the M60 machinegun or some other machinegun.	пулемёт	5.1 greet 5.5.1 introduce 3.7 express intention 6.2 sequence communication 6.3 refocus/adjust communication	The student will gain attention, motivate, and state the learning objectives in simple language.
<u>Disassembly</u> Remove the <u>stock group</u> . Do not take it apart any further. Remove the <u>buffer and operating rod</u> . Remove the <u>trigger group</u> . Remove the <u>receiver group</u> .	разбор пулемёта ложа в сборе буфер и шток газового поршня пусковой механизм в сборе ствольная коробка в сборе	1.1 identify 1.2 state factual information 4.6 directions/instructions/commands	The student will describe disassembly procedures, identify parts and label them, issue warnings and cautions about equipment, health, and safety.
<u>Cleaning</u> The machinegun must be clean at all times. When not in use, the machinegun must be <u>inspected weekly</u> . It should be cleaned every <u>90 days</u> . The <u>bore</u> should be cleaned with <u>compound solvent</u> . Do not <u>wipe dry</u> .	чистка пулемёта осматривать каждую неделю пулемёт девяносто дней канал ствола растворитель вытирать	1.1 identify 1.2 state factual information	The student will repeat the above procedure for cleaning. тряпка для чистки оружия = cleaning rag

TSO No. 11B.SF / C.7.02 / RU

TSO

EO

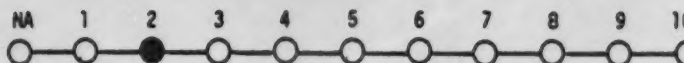


T.02

Page 4 of 6

TASK SCENARIO	KEY TERMS Vocabulary Items	FUNCTIONS Major Descriptors	COMMENTS Culture/References/Supplements
On the third day after firing, clean the bore with <u>rifle bore cleaner</u> and wipe dry.	состав для чистки канала ствола резиновая часть		
Except for <u>rubber parts</u> , all other parts should be cleaned with cleaning solvent.			
SPECIAL REMINDERS			
When firing at:			
<u>100 rounds per minute</u> , change the barrel every 10 minutes.	сто выстрелов на орудие в минуту	4.5 warnings 4.6 directions/ instructions/ commands	
<u>200 rounds per minute</u> , change the barrel every 2 minutes.	двести выстрелов на орудие в минуту		
<u>550 rounds per minute</u> , change the barrel every minute.	пятьсот пятьдесят выстрелов на орудие в минуту		
<u>Loading the machinegun</u>	зарядить		
Place the <u>safety</u> on FIRE.	переводчик на "огонь"	1.1 identify 1.2 state factual information	
Pull <u>bolt</u> to the rear.	болт, затвор	4.6 directions/ instructions/ commands	
Return <u>cocking handle</u> to the forward position.	рукоятка взвода	4.5 warnings	
Place <u>safety</u> on SAFE.	переводчик на предохранительном взводе		
Raise the <u>cover</u> and make sure the <u>feedtray</u> , <u>receiver</u> , and <u>chamber</u> are clear.	крышка лоток коробка патронник		The student will model the procedures for loading the machinegun (See EO C.7-2/3)

☒ TSO

☐ EO


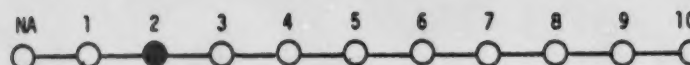
TASK SCENARIO	KEY TERMS Vocabulary Items	FUNCTIONS Major Descriptors	COMMENTS Culture/References/Supplements
Place the first round of the belt in the feed-tray groove.			
Close the cover, making sure the round stays in the feedtray groove.			
<u>Unloading</u>	разряжать пулемёт	1.1 identify 1.2 state factual information 4.6 directions/ instructions/ commands 4.5 warnings	The student will model and explain the steps in unloading. (See C.7-2/3)
Pull the bolt to the rear.			
Place the <u>safety</u> on <u>SAFE</u> .	переводчик на предохра- нительном взводе		
Return the <u>cocking handle</u> to the forward position.	рукоятка взвода		
Raise the <u>cover</u> and remove any <u>ammunition</u> from the <u>feedtray</u> .	крышка боеприпасы из лотка		
<u>Stoppage (Immediate Action)</u>			
Pull cocking handle to the rear.		1.1 identify 1.2 state factual information 4.6 directions/ instructions/ commands	The student will demonstrate the procedures of clearing stoppages.
Observe for <u>ejected round</u> .	выброшенный патрон		
If nothing is ejected, keep handle to the rear and place weapon on <u>SAFE</u> .			
Open cover and remove ammo.		4.5 warnings	
<u>Inspect chamber</u> .	осмотреть патронник		
Close cover.			
Move safety to <u>FIRE</u> and attempt <u>to fire</u> .	стрелять		

T.02

TSO No. 11B.SF / C.7.02 / RU

Page 6 of 6

☒ TSO

☐ EO


TASK SCENARIO	KEY TERMS Vocabulary Items	FUNCTIONS Major Descriptors	COMMENTS Culture/References/Supplements
The student will instruct others in engagement of targets with the machinegun. He will discuss and describe:			
Sight alignment	совмещение линии прицеливания с целью	1.1 identify	The student will follow the steps in EO C.7-2/3 for each of the topics of engaging targets.
Sight picture	вид с точкой целивания	1.2 state factual information	
Traversing	выполнение горизонтальной наводки	4.5 warnings	The student will follow EO C.7-4 and EO C.7-5 for Supervising Student Performance and Evaluating Student Performance.
Searching	прочёсывание в глубину	4.6 directions/instructions/commands	
Observation of Fire	наблюдение стрельбы		
Adjustment of Fire	корректирование огня		

1.0 Factual Information	2.0 Intellectual Attitudes	3.0 Emotional Attitudes	4.0 Suasion	5.0 Elementary Social Rituals	6.0 Managing Communication
1.1 identify objects, persons, processes	2.3.1 remembering	3.1.1 pleasure/liking	4.1 suggestions	5.5.1 introduce (oneself)	6.1.1 interrupt
1.2 state factual information	2.3.2 forgetting	3.1.2 displeasure/disliking	4.2 requests		6.2 sequence communication
	2.4.1 possibility	3.2.1 satisfaction	4.4 advice		6.3 refocus or adjust communication
	2.4.2 impossibility	3.2.2 dissatisfaction	4.5 warnings		6.9 request questions and/or comments
	2.5.1 capability	3.3.1 fear	4.6 directions/instructions/commands		
	2.5.2 incapability	3.3.2 worry	4.7 corrections		
	2.6 need	3.7 intention			
	2.8 obligation	3.9.1 approval			
	2.11 awareness	3.9.2 disapproval			
	2.12.1 difficulty	3.10.1 importance			
	2.12.2 ease	3.10.2 unimportance			
	2.13 belief/opinion				

T.04

LPM Vocabulary Indices for TSO No. 11B.SF / C.7.02 / RU

Page 1 of 2

Crit	English	Target Language: RUSSIAN
☒	adjustment of fire	корректирование огня
☒	ammunition	боеприпасы
☒	barrel	ствол
☒	bolt	болт, затвор
☒	bore	канал ствола
☒	buffer and operating rod	буфер и шток газового поршня
☒	chamber	патронник
☒	clean	чистить
☒	cleaning rag	тряпка для чистки оружия
☒	cocking handle	рукоятка взвода
☒	compound solvent	растворитель
☒	cover	крышка
☒	disassemble	разбирать
☒	ejected round	выброшенный патрон
☐	every week	каждую неделю
☒	fire (shoot)	стрелять
☒	forearm	цель
☐	hanger	серьга

Crit	English	Target Language: RUSSIAN
☒	inspect	осматривать
☒	inspect the chamber	осмотреть патронник
☒	load	заражать зарядить
☒	machinegun	пулемет
☒	ninety	девяносто
☒	observation of fire	наблюдение стрельбы
☒	on "safe"	на предохранительном взводе
☒	per minute	в минуту
☒	receiver	ствольная коробка
☒	rifle bore cleaner	состав для чистки канала
☐	rubber part	резиновая часть
☒	safety (selector)	переводчик
☒	searching	прочёсывание в глубину
☒	sight alignment	совмещение линии прицеливания
		с целью
☒	sight picture	вид с точкой целивания
☒	stock	ложа
☐	stock group	ложа в сборе
☒	traverse	выполнять горизонтальную наводку

Crit	English	Target Language: <u>RUSSIAN</u>	Crit	English	Target Language: _____
☒	tray	ЛОТОК	☐	_____	_____
☒	trigger mechanism	ПУСКОВОЙ МЕХАНИЗМ	☐	_____	_____
☒	unload	РАЗРЯДАТЬ	☐	_____	_____
☒	wipe	ВЫТИРАТЬ	☐	_____	_____
☐	*****This list does NOT include those vocabulary		☐	_____	_____
☐	items for machinegun parts on page T.02.		☐	_____	_____
☐	page 2 of 6***** They are also part		☐	_____	_____
☐	of the LPM Vocabulary Indices for this		☐	_____	_____
☐	Terminal Skill Objective*****		☐	_____	_____
☐	_____	_____	☐	_____	_____
☐	_____	_____	☐	_____	_____
☐	_____	_____	☐	_____	_____
☐	_____	_____	☐	_____	_____
☐	_____	_____	☐	_____	_____
☐	_____	_____	☐	_____	_____
☐	_____	_____	☐	_____	_____
☐	_____	_____	☐	_____	_____
☐	_____	_____	☐	_____	_____
☐	_____	_____	☐	_____	_____
☐	_____	_____	☐	_____	_____
☐	_____	_____	☐	_____	_____

Task 4.0 ENABLING OBJECTIVES

The system for delineating Enabling Objectives (EOs) is based on the requirement to successfully interface language with communication. When the training requirement is job-functional foreign language performance, the analyst is confronted with a simple powerful realization--language is not a synonym for communication. The foreign language requirement defines the prerequisite skills demanded of verbal or written communication. Communication itself has skill requirements beyond those of language. These communicative skill prerequisites are delineated through an analysis of the communicative activities found in job tasks.

A communicative activity, viewed as the job holder's communicative task, is a subset of a higher-order job task. This subset consists of communicative elements indispensable to the successful performance of the job task because a communicative requirement exists within the job task and English simply cannot be the language used to support that task. A foreign language skill is required to fulfill part of the communicative task, just as the communicative skill accomplishes part of the job task. Therefore the Enabling Objective System was developed through a Language and Communications Analysis Design. Figure 5, (pp. E.34-35) lays out the design and resulting system and methodologies for determining the language-communicative objectives which enable the student to reach mastery of the TSOs.

EO System

The EO system is divided into three stages: the communications analysis stage, the language analysis stage, and the synthesis stage. The EO System was developed through adherence to the following assumptions about the role of EOs in delineating language and communication training requirements:

- EOs must integrate language with communication.
- job-oriented language can be organized in the form of a functional syllabus.
- a breakdown (partitioning) of communicative activities forms a stronger basis for developing EOs than establishing levels of grammatical or syntactic complexity.
- one EO may adequately describe mastery progress toward more than one TSO.
- EOs based on communicative activities will be finite in number.
- a single communicative activity breakdown with the elements from the language functions catalog is a sufficient learning path to any TSO requiring that communicative activity, if the specialized vocabulary is provided.

Communications Analysis Stage. Communications Analysis is the process of breaking down in a systematic fashion the underlying strategy of a communicative activity into a finite number of communicative events. These serve as categories into which language functions necessary for accomplishing the communicative event can be seeded. The actual analysis is neither unduly complex nor excessively time consuming. Strategy plans are already available in many forms for every communicative activity. The major requirement is systematic rigor.

At the highest level the student's language behavior can be thought of as exhibiting one or more of the communicative skills of listening, speaking, reading, or writing. During this project these skills have been expanded to include such combinations as listening/speaking, reading/writing, and the mixed modes of listening/writing and speaking/reading. For each communicative skill several communicative activities were identified. For example, the communicative skill of listening/speaking is demonstrated through the communicative activities of demonstrating, teaching, interviewing, conversing, telephoning, facilitating and so on. During the communicative activity of teaching, an instructor's effectiveness is largely determined by his/her plan of instruction (POI) and his/her communicative

LANGUAGE & COMMUNICATION ANALYSIS DESIGN

E-34

DESIGN PARAMETERS (REQUIREMENTS)

The design requirements are the same as those in the Task Analysis System and the TSO Conversion Routine.

Analysts' skills and knowledges must be supplemented with linguists and native speakers of the target language.

Data tracking and control is governed by the EO Methodology and its supporting procedures.

Output control is maintained by prespecified formats and content categories.

54 The EO System is based on the following language and communication assumptions:

ENABLING OBJECTIVE SYSTEM (STAGES/FUNCTIONS)

COMMUNICATIONS ANALYSIS STAGE

Research the communicative activity

Identify sources of information

the required TSO
previously developed EOs
relevant library materials

Collect resources and review

Develop/Breakdown the Com Act

Determine a logical organization

Develop a communicative strategy

Partition the strategy into learning blocks

Add relevant learning blocks that support the strategy, such as:

providing communicative
guidance
question-answer routines

Supply required language functions

Review for adequacy

Try out communicative strategy

Check for sufficient number of learning blocks

Check for sufficient number and types of language functions for testing

EO METHODOLOGY (DATA CONTROL ALGORITHM)

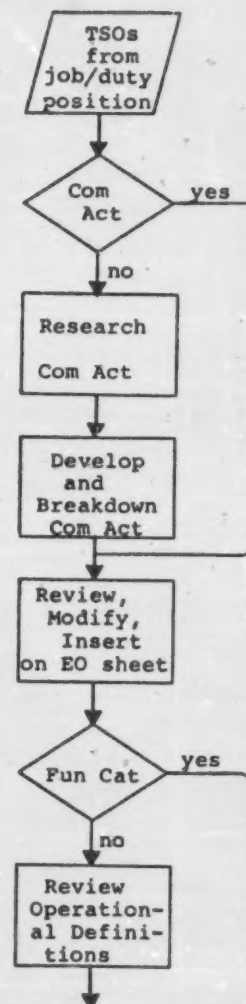


Figure 5: Language and

- EOs must marry language to communication.
- job-functional language can be organized in the form of a functional syllabus.
- a breakdown of communicative activities forms a strong basis for developing EOs than establishing levels of grammatical or syntactic complexity.
- one EO may adequately describe mastery progress toward more than one TSO.
- EOs based on communicative activities will be finite in number.
- a single communicative activity breakdown with the elements from the language functions catalog is, when given the specialized vocabulary, a sufficient learning path to any TSO requiring that communicative activity.

56

LANGUAGE ANALYSIS STAGE

Review the operational definitions of the functions

Check the functions list for comprehensiveness

Review the operational definitions

Research functions literature

Modify, add, or delete functions as required

Develop functions catalog and rolebooks

Establish functional categories

Determine augmenting roles

Generate elements for each category in the catalog and rolebooks

Review functions catalog and rolebooks

Check functions catalog for adequacy

category necessity
element sufficiency

Check role elements for cultural sensitivity

SYNTHESIS STAGE

Integrate the functional elements

Seed the functional elements into the functions in the EO set

Review the complete communicative activity within the EO set

Check the elements for sufficiency and integrity

Marry the TSO to the EO set

Compile all TSO/EO support documents

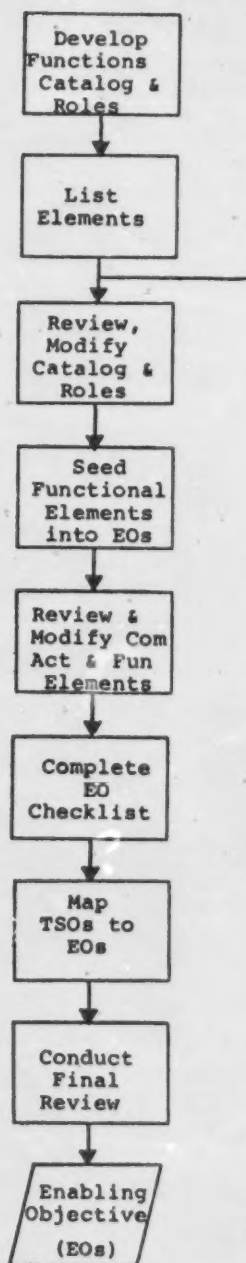
Map the TSO to the EOs through the TSO Map Worksheet

Conduct final review

Convene expert review panel

Modify as required

Complete final draft



57

E-35

strategy for carrying it out. In order to learn the language to accomplish a job task, the student must also master the communicative strategy for implementing the language skill. The job holder can only use his/her language skills and knowledges to the degree that s/he knows how to use those skills and knowledges. Moreover, communicative activities, as strategic plans, can be broken down into learning blocks that provide a clear path to TSO mastery.

The logic of the communications analysis is based on the following assumptions and definitions: (1) communicative skills underlie communicative activities; (2) communicative activities are best accomplished through a sound communicative strategy; (3) a communicative strategy is a structured plan for conducting communicative operations; (4) communicative operations can be taught as learning blocks (enabling steps) of one or more communicative events; (5) communicative events form categories in which language functions can be identified; (6) the language functions will exhibit one or more elements in the target language that exemplify the grammatico-structural requirements.

Figure 6 (pp. E.38-39) shows the communicative activity breakdowns of the primary listening/speaking skills found in the five job/duty positions analyzed during this project. The activity "briefs" is actually classified as a speaking, rather than listening/speaking skill. Briefings are normally prepared in advance and delivered to an audience, and questions may or may not be asked afterward. In this case, briefing was included in the listening/speaking skill category because the strategy calls for a communicative operation (a learning block) for comprehending and answering questions of different types.

COMMUNICATIVE SKILL: Listening/Speaking

COMMUNICATIVE ACTIVITIES: (Briefs), Demonstrates, Teaches, Converses,
Telephones, Facilitates

COMMUNICATIVE STRATEGY:	The actual, real-world plan for carrying out the communicative task for the purpose of accomplishing the job task.
COMMUNICATIVE OPERATIONS:	The learning blocks of communicative events that form logical units or enabling steps for mastery of the strategy implicit in the communicative activity.
COMMUNICATIVE EVENTS:	Segments of a communicative operation or learning block for which language functions (if used) can be identified.

Language Functions:	The language functions supply elements that provide examples of the grammatico-structural patterns required for achieving the communicative event in the target language.
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Language Analysis Stage. The language analysis is conducted using a functional approach to language communication. This approach parallels the functional-notional approach advocated by the Council of Europe for teaching European languages. Only a brief explanation of language functions is given here. A more complete description is found in Volume III of the Report of Recommendations.

In real acts of communication, language users mix and match sentence types according to what they want to say. The crucial question for language analysis is: "What does the MOS holder need to say?" The functional approach used in the C/LOBS starts with that question. That is, the functional approach begins by defining the context in which the target language is used. Then it specifies the grammatical patterns normally found in those contexts.

Language functions are purposes for which the MOS holder uses language. For example, s/he might want to fulfill the purposes of making offers, expressing displeasure, interrupting, identifying objects, and introducing him/her self.

COMMUNICATIVE ACTIVITY "BRIEFS"	COMMUNICATIVE ACTIVITY "TEACHES"	COMMUNICATIVE ACTIVITY "TELEPHONES"
STATING THE PROBLEM (NEED OR REASON) Gain attention 3.7/5.1/5.5.1/6.1.1/6.2/6.3 Clarify/State the problem 1.1/1.2/2.1.1/2.1.2/2.6/2.7.1/ 2.7.2/2.11/3.10.1	INTRODUCING THE SUBJECT Gain attention 3.7/5.5.1/6.1.1/6.2/6.3 Motivate 2.6/2.8/3.1.1/3.4/3.10.1/4.1 State learning objectives 1.1/1.2 Provide overview of activities and/or procedures 1.1/1.2/3.7 Explain evaluation 2.8/2.5.1/2.5.2/3.2.1/3.2.2	GREETING/INTRODUCTION 5.16.1-8/5.1.1/5.1.2/5.5.1/ 5.5.2
INTRODUCING KEY TERMS Define required terms 1.1/1.2/2.6 Provide special definitions 1.1/1.2	DEVELOPING THE SUBJECT Identify/define main points 1.1/1.1/3.10.1 Explain/support main points 1.1/1.2/2.4.1/2.4.2/2.5.1/2.5.2/ 2.6/2.8/3.10.1/4.1/4.5/4.6	STATING THE PURPOSE Obtain/Transfer Factual Information 1.1/1.2/1.3/2.2.1/4.2/6.8 Evaluate Options 2.0 Intellectual Attitude. (All functions) Assess Human Reactions 3.0 Emotional Attitudes (All functions) Initiate Actions 2.4.1/2.4.2/2.5.1/2.5.2/2.6/4.2
REPORTING FINDINGS AND/OR BACKGROUND INFORMATION Order events chronologically 1.1/1.2/6.2 Order events according to significance 1.1/1.2/2.6/2.8/2.13/3.2.1/ 3.10.1/3.10.2/6.2	CONCLUDING THE LESSON Recall main points 1.1/1.2/2.3.1/2.3.2 Recommend courses of action 2.6/2.8/3.10.1/4.1/4.4/4.6/4.7	ACTUALIZING THE PURPOSE Develop Strategy Initiate Communication 1.0 Factual Information (All functions) 2.0 Intellectual Attitudes (All functions) 3.0 Emotional Attitudes (All functions) 4.0 Getting things done (Suasion) (All functions) Communications Management 6.3/6.5/6.7/6.8.1
LISTING ALTERNATIVE SOLUTIONS Report optimal alternative 1.1/1.2/2.5.1/2.6/3.2.1/3.6/ 3.9.1 Report other alternatives 1.1/1.2/2.5.1/2.5.2/3.2.1/3.2.2/ 3.9.1/3.9.2	PROVIDE COMMUNICATIVE GUIDANCE Encourage questions 6.9 Answer questions 1.1/1.2/2.4.1/2.4.2/2.5.1/2.5.2/ 2.10.2/2.12.1/2.12.2/2.13/3.1.1/ 3.1.2/3.6/3.10.1/3.10.2/4.7 Acknowledge emotional attitudes 3.1.1/3.1.2/3.2.1/3.2.2/3.3.1/ 3.3.2/3.10.1/3.10.2 Provide supportive correction; recommend; caution 3.2.1/4.1/4.2/4.5/4.7	CONFIRMING THE RESULTS Report facts 1.1/1.2/2.1.2/2.1.2/4.7 Report Thinking of the Other Party 2.0 Intellectual Attitudes (All functions) 4.7 Report Feelings of the Other Party 3.0 Emotional Attitudes (All functions) 2.1.1/2.1.2/4.7 Report Actions to be Taken 1.1/1.2/2.1.1/2.1.2/4.7
RECOMMENDING REQUIRED ACTIONS 4.1/4.4/4.5/4.7/2.4.1/2.4.2/ 2.5.1/2.5.2/2.12.1/2.12.2/2.13/ 3.2.1/3.2.2/3.11 PROVIDING COMMUNICATIVE GUIDANCE Encourage questions 6.9 Answer questions 1.1/1.2/2.4.1/2.4.2/2.5.1/ 2.5.2/2.7.1/2.7.2/2.12.1/2.12.2/ 2.13/3.5/3.9.1/3.10.1/3.10.2 Monitor presentation 6.4/6.5/6.7 Acknowledge emotional attitudes 3.1.1/3.1.2/3.2.1/3.2.2/3.10.1/ 3.10.2 Provide supportive correction; recommend; caution 2.10.1/2.10.2/3.2.1/4.7/4.1/4.2/ 4.4/4.5 Close 5.10	CLOSING Inquire about Further Concerns 1.3/2.6/2.3.1/2.3.2/3.3.1/ 3.3.2/3.8/3.10 Close 5.10/5.16.9/5.16.10	

**COMMUNICATIVE
ACTIVITY****"DEMONSTRATES"****INTRODUCING THE DEMONSTRATION**

Gain attention
3.7/5.5.1/6.1.1/6.2/6.3
Motivate
2.6/2.8/3.10.1/4.1
State learning objectives
1.1/1.2
Provide overview of activities
and/or procedures
1.1/1.2/3.7/6.2
Explain evaluation
2.5.1/2.5.2/2.8/3.10.1

PROVIDING EXPLANATION

Issue warnings and cautions
4.5/2.4.1
Identify parts and label them
1.1/1.2
Identify steps in a procedure
1.1/1.2/4.6/6.2

DEMONSTRATING

Make comments on modeled
actions
2.3.1/2.3.2/2.4.1/2.4.2/2.6/
3.10.1/4.5/4.6
Make comments on procedures
2.3.1/2.3.2/2.4.1/2.4.2/2.6
3.10.1/4.5/4.6

SUPERVISING STUDENT PERFORMANCE

Answer questions
1.1/1.2/4.6/4.4/4.7
Acknowledge emotional
attitudes
3.1.1/3.1.2/3.3.1/3.3.2/3.10.1/
3.10.2
Provide supportive correction
3.2.1/4.1/4.4/4.7

EVALUATING PERFORMANCE

Ask questions
1.3/2.5.1/2.11
Express approval/disapproval
3.9.1/3.9.2
Provide assessment
1.1/1.2/3.2.1/3.2.2/4.7

PROVIDING GUIDANCE

Encourage questions
6.9
Answer questions
1.1/1.2/2.4.1/2.4.2/2.5.1/2.5.2/
2.12.1/2.12.2/2.13/3.10.1/3.10.2
Acknowledge emotional attitudes
3.1.1/3.1.2/3.3.1/3.3.2/3.10.1/
3.10.2
Provide supportive correction;
recommend; caution
3.2.1/4.1/4.2/4.5/4.7

COMMUNICATIVE ACTIVITY**"FACILITATES"****DETERMINING THE PURPOSE**

Meet with Responsible Party (RP)
Brief RP on key factors
Recommend a communicative
strategy

**FACILITATING THE INTERCOMMUNICA-
TION**

Follow established protocol
Carry out special requests of
the RP
Facilitate social interaction/
Monitor the effectiveness of
communication
5.1/5.3/5.5.1/5.5.2/5.10/6.1.1/
6.7/6.10
Report/Inquire as required
1.0 Factual Information
(All functions)
2.0 Intellectual Attitudes
(All functions)
3.0 Emotional Attitudes
(All functions)
4.0 Getting things done
(Suasion)
(All functions)

FOLLOWING-UP

Debrief with RP
Carry out immediate actions
requested by the RP

**COMMUNICATIVE
ACTIVITY****"CONVERSES"****GREETING/INTRODUCTION**

5.1/5.3.1-7/5.5.1/5.5.2/5.8/
5.10/5.11/5.12/6.1.6

STATING THE PURPOSE

Obtain/transfer factual
information
1.1/1.2/1.3/2.2.1/4.2/6.8
Evaluate options
2.0 Intellectual Attitudes
(All functions)
Assess human reactions
3.0 Emotional Attitudes
(All functions)
Initiate actions
4.2/2.4.1/2.4.2/2.5.1/2.5.2/2.6

ACTUALIZING THE PURPOSE

Develop strategy
Initiate communication
1.0 Factual Information
(All functions)
2.0 Intellectual Attitudes
(All functions)
3.0 Emotional Attitudes
(All functions)
4.0 Getting things done
(Suasion)
(All functions)
Control conversation flow
6.3/6.8.1/6.8.2/6.8.3

CONFIRMING THE RESULTS

Report facts
1.1/1.2/2.1.1/2.1.2/4.7
Report thinking of other party
2.0 Intellectual Attitudes
(All functions)
4.7
Report feelings of the other
party
3.0 Emotional Attitudes
(All functions)
2.1.1/2.1.2/4.7
Report actions to be taken
1.1/1.1/2.1.1/2.1.2/4.7

CLOSING

Inquire about further concerns
1.3/2.6/2.3.1/2.3.2/3.3.1/3.3.2/
3.8/3.10
Close
5.2/5.4/5.10

****CONVERSES**** is used here for
job-purposeful conversing
only.

Most language functions can be expressed by a variety of grammatical patterns. For example, the function "direct" can be expressed using the following sentence patterns or structures:

<u>Function</u>	<u>Sentence Form</u>	<u>Realizations</u>
direct	imperative	Change the bandage.
	conditional	It would be helpful if you would change the bandage.
	infinitive	You're expected to change the bandage.
	modal	You must change the bandage.

In each of the sentence realizations the speaker is specifying an action to be carried out by someone else. In each case, while the grammatical pattern varies, the function or purpose of the communication remains the same.

There is no one-to-one relationship between grammatical structures and the functions they express. The following example shows the "flip side of the coin." While the first illustration demonstrates that the imperative construction is one of the sentence forms that can be used to direct, the following illustration shows that the imperative construction is a sentence form that can be used for functions other than direct.

<u>Sentence Form</u>	<u>Function</u>	<u>Realizations</u>
imperative	direct	Change the bandage.
	request	Please change the bandage, will you?
	advise	Try changing the bandage.
	apologize	Forgive me.
	invite	Come to our next meeting.

Besides being used to give an order or direction, the imperative form is also commonly used to make a request, to give advice, to invite, or to make an

apology. All of these are different purposes of communication that use a common grammatical pattern.

The illustrations show that grammatical structures vary independently of variations in function. That has definite implications for analysis, design, development, testing, and the writing of performance objectives in a language environment:

- "How to say it" goes hand in hand with "when to say it." Teaching a student a set of grammatical structures won't necessarily give him/her the functional facility s/he needs.

- Organizing a syllabus by functions provides a way to sequence instruction that makes sense to the learner. S/he can see ways to fulfill his/her communicative needs; that motivation inspires further efforts to learn.

- Within a given function whose mastery is deemed necessary for a given class of learners, the course designer can choose certain modes of expression to be emphasized, de-emphasized, or even not taught at all depending on considerations of grammatical complexity.

Synthesis Stage. The synthesis stage interfaces the communicative activity with the language functions to develop the EOs. This combination of communicative acts and language elements is reviewed and validated with a panel of experts. Finally, the EO is mapped to the appropriate TSO through the completion of the TSO Map.

Methodology and Procedures

Again, the methodology is a combination of a data control algorithm and a set of human procedures to accomplish the analysis. The procedures are listed in Volume I. The EO methodology is the most taxing to the skills of analysts and linguists. The data control algorithm (pp. E.34-35) reflects this problem

through the review-and-validation operations blocks. Because of the complexity of the language analysis, tools become a mandatory requirement of the EO system.

Tools

With respect to the breakdown of communicative activities a number of tools are available to analysts. Textbooks, programmed instruction, and how-to-do-it manuals exist for all forms of communication: public speaking, teaching briefing, technical writing, and translating. These sources serve as tools to assist the analyst in developing one or more paths to the TSO. These "paths" are developed in the first column of the EO Worksheets.

On the other hand, when developing language functions, the analysts will find that few tools are commercially available. Some functional grammars are in the public domain, but there is little available that tells exactly how to do it. Volumes III and IV of the Report of Recommendations provide the conceptual tools and English examples of how to develop functions catalogs. These tools include:

- A book of operational definitions of all functions used in this project.
- A functions catalog for English derived from the operational definitions.
- Rolebooks for six roles: commander, advisor, instructor, facilitator, questor, and aide.

Other examples include the functions catalogs for Chinese, Spanish, and Russian together with the specific rolebooks required for the MOSs investigated during the course of this project.

Operational Definitions. The functions list was given earlier on pages E.18 to E.20. After the critical functions were determined, a number of elements for each function had to be provided. Elements are the patterns or structures that can be used to express a given function. The preceding example showed that the function "direct" could be expressed by sentences using the imperative, conditional and modal forms. These are the elements of the function.

The functions with their elements make up the Functions Catalog for the particular target language. Guiding the development of the functions list and the generation of language elements are the operational definitions. An operational definition includes the function category and number, a list of synonyms for the function, a constitutional definition, English examples of functions catalog entries, and comments (instructions).

Functions Catalog. The functions catalogs are organized according to the six major categories of verbal communication:

- 1.0: Report, express, and inquire about factual information
- 2.0: Report, express, and inquire about intellectual attitudes
- 3.0: Report, express, and inquire about emotional attitudes
- 4.0: Report, express, and inquire about getting things done (suasion)
- 5.0: Engage in social rituals
- 6.0: Managing communication

Each of the four catalogs--English, Chinese, Russian, and Spanish--has well over one thousand elements. This allows the analyst as well as the course developer to select appropriate patterns or structures to meet the functional requirements of the communicative task in the TSO. Figure 7 (p. E.44) depicts the governing relationship of the operational definition of Function 4.6 Report, express, or inquire about directions with the elements of Function 4.6 in the English Functions Catalog.

The rolebooks are organized like the function catalogs. These rolebooks supply the job holder with the appropriate language elements that more nearly approximate the language style required in the conduct of the MOS holder's job performance. Roles are only used with tasks that require speaking performance.

Figure 7
FROM OPERATIONAL DEFINITIONS TO ELEMENTS IN THE FUNCTIONS CATALOG:
AN EXAMPLE

Function 4.6: Report, Express, and Inquire about Directions/
Instructions/Commands

Function 4.6 Report, express or inquire about directions	
Function category 4. Report, express or inquire about getting things done (question)	
Synonyms	Order, charge, command
Definition	-to request with authority; to give an order/instruction to be carried out by another -to command
English examples of verbal data	Immobilize the broken limb. Do not begin until the signal is sounded. Memorize this message. *I want you to get this to headquarters immediately.
Comments	Assumes speaker has authority within the transaction; speaker may or may not have authority outside the transaction. *Note difference between function 4.6 and function 3.8-- Report, express, or inquire about want.
English examples of function catalog entries	Imperatives I want you to + VP

Operational
Definition for
Function 4.6

Elements
from the
English
Functions
Catalog
for
Function
4.6

.15 $DC + NP + \left\{ \begin{array}{c} \text{WARN} \\ \text{CAUTION} \\ \text{TELL} \end{array} \right\} + NP + \left\{ \begin{array}{c} \text{that} + S \\ \text{about} + NP \end{array} \right\} ?$

EX: Did you tell them that the pipes are leaking gas?

4.6 report, express, or inquire about directions/instructions/commands

.1 $\left(NP + \left\{ \begin{array}{c} \text{SAY (that)} \\ \text{TELL} + NP + \text{(that)} \\ \text{ASK if} \end{array} \right\} \right) + NP + \left\{ \begin{array}{c} \text{ORDER} \\ \text{TELL} \\ \text{COMMAND} \\ \text{INSTRUCT} \end{array} \right\} + NP + \text{(NEG)} + VP$

EX: They asked if we instructed him not to leave his post.
We told them to bring paper.

express:

.2 IMPERATIVES, both positive and negative

EX: Wild Bill, wait for me!

.3 I want you + VP

EX: I want you to take over the cooking.

inquire about:

.4 Is that an order?

.5 $BE + NP + \left\{ \begin{array}{c} \text{ordering} \\ \text{telling} \\ \text{commanding} \\ \text{instructing} \end{array} \right\} + NP + \text{(NEG)} + VP ?$

EX: Are they ordering me not to stop?

Output of the EO System

The output of the EO system is the EOs with their communicative activities broken down into learning blocks, the functions catalog for the target language, the language elements "seeded" into the EOs, and the TSO Map. The TSO Map interfaces the appropriate set of EOs with the TSO. It describes the task, provides an overview of the EO breakdowns, recommends a training sequence, lists required support materials, and defines desired entry behavior. Figure 8 (p. E.46) is the TSO Map for interfacing the EO set for "DEMONSTRATES" with the TSO for the care and use of the M60 Machinegun.

The EOs, as output, are contained on the EO Worksheets. The Worksheets, consisting of three columns, show the relationships among skill development, linguistic knowledges, and communicative practice. Under the heading of skill development, each EO breaks down the skill into the communicative events necessary for adequate performance. It tells what the learner is to do with the language knowledge s/he acquires.

In the column for language knowledges, the elements required for minimal performance of the communicative event are listed. These elements, listed by number, are found in the Functions Catalog. In the column for communicative practice, additional comments, instructions, and supplementary information are provided. The first two EOs for the communicative activity, "DEMONSTRATES" are found on pages E.47-50: EO C.7.1 INTRODUCING THE DEMONSTRATION AND EO C.7.2 PROVIDING INFORMATION.

TSO Map

TSO 11B.SF / C.7.02 / RU

M.01

RECOMMENDED TRAINING SEQUENCE

NA 1 ② 3 4 5 6 7 8 9 10

SEQUENCE TYPE

☐ linear☒ hierarchical☐ solitary

PRIMARY DECISION FACTOR

☐ job criticality☒ dependent relationship☐ independent relationship

REQUIRED SUPPORT MATERIALS

Enabling Objectives: EO Demonstrate C.7 /1-6Functions Catalog: RussianRolebooks: Instructor (Russian)Special Vocabulary: See Vocabulary Indices (T.04)Technical Documents: Machinegun 7.62-MM, M60, FM 23-67

DESIRED ENTRY BEHAVIOR

"Able to satisfy routine social demands and limited work requirements. Can handle with confidence but not with facility most social situations including introductions and casual conversations about current events, as well as work, family, and autobiographical information; can handle limited work requirements, needing help in handling any complications or difficulties; can get the gist of most conversations on non-technical subjects (i.e. topics which require no specialized knowledge) and has a speaking vocabulary sufficient to express himself simply with some circumlocutions; accent, though often faulty, is intelligible; can usually handle elementary constructions quite accurately but does not have thorough or confident control of the grammar." Army Regulation 350-50

ENABLING OBJECTIVES: Scope and Sequence Chart

Communicative Activity: "DEMONSTRATES"

INTRODUCING THE DEMONSTRATION

Gain attention
3.7/5.5.1/6.1.1/6.2/6.3
Motivate
2.6/2.8/3.10.1/4.1
State learning objectives
1.1/1.2
Provide overview of activities
and/or procedures
1.1/1.2/3.7/6.2
Explain evaluation
2.5.1/2.5.2/2.8/3.10.1

PROVIDING EXPLANATION

Issue warnings and cautions
4.5/2.4.1
Identify parts and label them
1.1/1.2
Identify steps in a procedure
1.1/1.2/4.6/6.2

DEMONSTRATING

Make comments on modeled
actions
2.3.1/2.3.2/2.4.1/2.4.2/2.6/
3.10.1/4.5/4.6
Make comments on procedures
2.3.1/2.3.2/ 2.4.1/2.4.2/2.6
3.10.1/4.5/4.6

SUPERVISING STUDENT PERFORMANCE

Answer questions
1.1/1.2/4.6/4.4/4.7
Acknowledge emotional
attitudes
3.1.1/3.1.2/3.3.1/3.3.2/3.10.1/
3.10.2
Provide supportive correction
3.2.1/4.1/4.4/4.7

EVALUATING PERFORMANCE

Ask questions
1.3/2.5.1/2.11
Express approval/disapproval
3.9.1/3.9.2
Provide assessment
1.1/1.2/3.2.1/3.2.2/4.7

PROVIDING GUIDANCE

Encourage questions
6.9
Answer questions
1.1/1.2/2.4.1/2.4.2/2.5.1/2.5.2/
2.12.1/2.12.2/2.13/3.10.1/3.10.2
Acknowledge emotional attitudes
3.1.1/3.1.2/3.3.1/3.3.2/3.10.1/
3.10.2
Provide supportive correction;
recommend; caution
3.2.1/4.1/4.2/4.5/4.7

ENABLING OBJECTIVE C.7.1 INTRODUCING THE DEMONSTRATION

E.01

Page 1 of 3

RUSSIAN

SKILL DEVELOPMENT	LINGUISTIC KNOWLEDGES	COMMUNICATIVE PRACTICE
MacroSTANDARDS Communicative Activity "DEMONSTRATES"	MicroSTANDARDS (Functional Elements)	COMMENTS AND ADDITIONAL INFORMATION
INTRODUCING THE DEMONSTRATION A. <u>Gain attention</u> The student attention using the following functions: 6.1.1 interrupt 5.5.1 introduce oneself 3.7 express intention 6.2 sequence communication 6.3 refocus or adjust communication B. <u>Motivate</u> The student will motivate the audience by pointing out how the learning will be relevant to their needs, meaningful to their job tasks, or in some other manner proven effective for the target audience. The student will use functions: 2.6 need 2.8 obligation 3.10.1 importance 4.1 suggest	6.1.1: 1/4/6 5.5.1: 3.7: 2/3/4/5/6/8 6.2: 1/2/3/5/6 6.3: 2/4/7/8 2.6: 1/2/3/4/7 2.8: 2/3/4/5/7/9/10/11 3.10.1: 1-7 4.1: 2/4/5/6/7/10 2/4-7/10	SALUTATION/INTRODUCTION - INCLUDE JOB TITLE The student should use the appropriate Rolebook as a Job Performance Aid in order to effect the proper style and register through a variety of specific role statements. The student must have command of a number of stock phrases such as: "May I have your attention, please." "If everyone is ready, let's get started." The student will employ with automatic fluency such instructional introductions as: "The objectives for this session are as follows." "There are three objectives for this lesson." "At the end of this session, you should be able to do three things." "Given _____, you should be able to _____."

ENABLING OBJECTIVE C.7-1 INTRODUCING THE DEMONSTRATION

RUSSIAN

Page 2 of 3

SKILL DEVELOPMENT	LINGUISTIC KNOWLEDGES	COMMUNICATIVE PRACTICE
MacroSTANDARDS Communicative Activity "DEMONSTRATES"	MicroSTANDARDS (Functional Elements)	COMMENTS AND ADDITIONAL INFORMATION
<u>C. State learning objectives</u> The student will state learning objectives in behavioral (what the learner will do) terms. S/he will use the following functions: 1.1 identify objects, persons, processes 1.2 state factual information <u>D. Provide overview of activities and/or procedures</u> The student will describe in order the events that will take place during the presentation or group activities. S/he will use functions: 1.1 identify objects, persons, processes 1.2 state factual information 3.7 intention 6.2 sequence communication <u>E. Explain evaluation</u> The student will describe the reason for evaluation, the process of finding out if the objectives can or cannot be performed by the audience (learners). It is explained as an obligation on the part of the presenter and the learner. 2.8 obligation 2.5.1 capability	1.1: 1-16 1.2: 1/2 1.3: 1-5 1.1: 1/16 1.2: 1/2 3.7: 2/3/4/5/6/8 6.2: 1/2/3/5/6 2.8: 2/3/4/5/7/9/10/ 11 2.5.1: 1/2/3-8/10-12	The student must be able to verbally state learning objectives in action hands-on terms in the target language. This overview works as an "advanced organizer" for the steps and activities to be performed by the learner. The evaluation should be presented as everyone's responsibility. The evaluation should be viewed as non-threatening.

ENABLING OBJECTIVE C.7-1 INTRODUCING THE DEMONSTRATION

E.01

RUSSIAN

Page 3 of 3

SKILL DEVELOPMENT

LINGUISTIC KNOWLEDGES

COMMUNICATIVE PRACTICE

MacroSTANDARDS Communicative Activity "DEMONSTRATES"	MicroSTANDARDS (Functional Elements)	COMMENTS AND ADDITIONAL INFORMATION
2.5.2 incapability 3.10.1 importance	2.5.2: 1-9 3.10.1: 1-7	

ENABLING OBJECTIVE C.7-2 PROVIDING EXPLANATION

RUSSIAN

Page 1 of 1

SKILL DEVELOPMENT	LINGUISTIC KNOWLEDGES	COMMUNICATIVE PRACTICE
MacroSTANDARDS Communicative Activity "DEMONSTRATES"	MicroSTANDARDS (Functional Elements)	COMMENTS AND ADDITIONAL INFORMATION
PROVIDING EXPLANATION A. <u>Issue warnings and cautions</u> The student will point out any parts or procedures that could cause a safety hazard endangering health, equipment, or environment. S/he will use functions: 4.5 warnings 2.4.1 possibility B. <u>Identify parts and label them</u> The student will identify the various parts of equipment, tools, machinery, and the like, using simple sentence constructions as found in functions: 1.1 identify objects, persons, processes 1.2 state factual information C. <u>Identify steps in a procedure</u> The student will list in order the steps in the procedure to be learned using functions: 1.1 identify objects, persons, processes 1.2 state factual information 4.6 directions/instructions/commands 6.2 sequence communication	4.5: 2-10 2.4.1: 2/3/7/8 1.1: 1-16 1.2: 1/2 1.1: 1-16 1.2: 1/2 4.6: 1-5 6.2: 1/2/3/5/6/7	Safety is a required procedure. Training aids, labeled diagrams are often most helpful here.

CYCLE OF FIDELITY

At this point the reader has been introduced to the components and relationships which make up the C/LOB system. S/he may be thinking--"It looks okay, but does it work?" The authors can of course claim that it does, but managers, task analysts and course developers all need something more than faith in allegations to assess the sufficiency of the system's output. So here is a quick-and-dirty way to check on the internal consistency and sufficiency of the TSOs and EOs. It's called the Cycle of Fidelity. Figure 9 (p. E.53) is a visual illustration of the procedures which follow:

- Pick the language utterance you wish to communicate in the target language from the TSO. (T.O2 pages).
 - Column 1 is the scenario
 - Column 2 contains key vocabulary items
 - Column 3 contains the critical functions
- Decide whether you want to cycle through communication-to-language or language-to-communication. (It makes no difference since the two are interdependent.)
- If you select language-to-communication, for example, you will move clockwise through the cycle in Figure 9.
- According to Figure 9, you have selected the utterance "Remove the trigger group." This is from the example TSO on page E.22. The function is 4.6 Directions/Instructions/Commands.
- Look up Function 4.6 in the Operational Definitions. This defines the function and gives examples, synonyms, and instructions for developing elements.
- Look up Function 4.6 in the Function Catalog for the target language. (English in this case).
- Review the language elements. Element 4.6.2 is Imperatives: positive and negative.
- Review the EO C.7.2 Providing Explanation from the set of EOs for "DEMONSTRATING." Element 4.6.2 is noted as one of the elements required for identifying steps in a procedure.

- Note the TSO Map. It interfaces the particular EO set for "DEMONSTRATES" with the TSO for care and use of the machinegun.
- Now you have returned to the TSO--right back where you started. You have returned to the key vocabulary item "trigger group" and Function 4.6 Directions/Instructions/Commands.

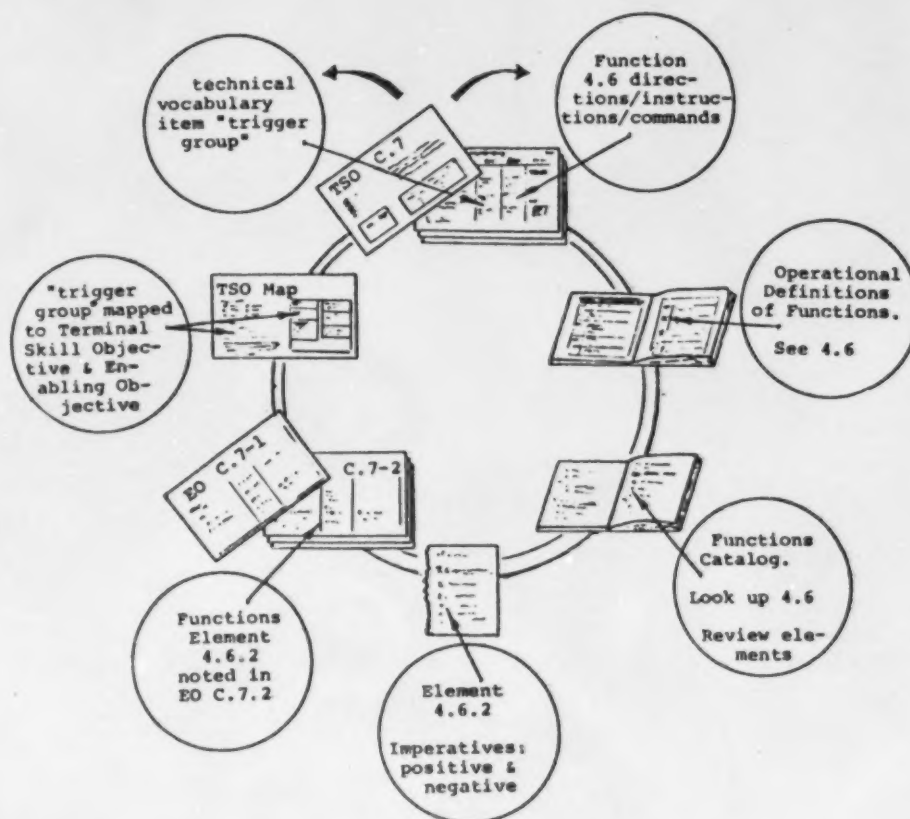
Does it work every time? No. The functional elements are actually test parameters. The system is not supposed to generate a "machine translation." The system generates the performance objectives. However, it's a pretty good check for fidelity and it's reassuring to see how often it works.

CYCLE OF FIDELITY BETWEEN COMMUNICATION AND LANGUAGE

Special Forces
infantryman
demonstrating . .



. . the procedures
for disassembly
of the machinegun



RECOMMENDATIONS

The recommendations to decision-makers on the management and implementation of the C/LOBS can be summarized in three short phrases:

- PLAN
- BE PROACTIVE
- FOLLOW-UP

The reader should keep these in mind while reading through the specific recommendations; each of them spells out one or more of those messages in detail. To successfully implement any new system, the manager needs both to be thoroughly familiar with the properties of the system, and to develop a management system to organize implementation strategies.

Nature of the system:

- The critical areas for decision-making are given in the decision diamonds in the three control algorithms (Task Analysis System, TSO Conversion Routine, EO System). The manager must also be thoroughly familiar with each operational block within the system.
- This system provides for a holistic view of the job, rather than a fragmented perspective. This gives management the opportunity to get a view of the central purpose of the job, and to make decisions with that purpose in mind.
- The C/LOBS is modular. Each of its components has an internal organization independent of any of the others. This means that each part of the system can be modified, de-bugged, tinkered with, or totally revamped without major repercussions to the rest of the overall system.

Implications for Implementation:

- The manager should be aware of the reaction continuum for any innovation--

immediate rejection to slavish adoption. The immediate rejectors may be heard to say "it'll never work" or "nothing does the job as well as the old way" or "I found a section that doesn't work; that proves it's all wrong." Managers should remember that this system, like any new machine will require de-bugging. Minor flaws that keep the system from operating at optimal efficiency will be discovered and corrected. The presence of "bugs" is not a valid reason for rejecting the system as a whole. The manager should keep in mind the following points when de-bugging the system:

- What's the operational level of the problem? Does it concern a sub-procedure or an overall system component?

- Who's making the judgment? The same person will not be the best judge of adequacy for each level of system analysis. For example, TRADOC systems personnel would be the best judges of C/LOBS congruence with IPISD guidelines.

- At the other end of the rejection-adoption continuum is slavish adherence of the system. Some people jump at any new model or procedure as the panacea or magic formula that will solve all their problems--if only they follow it to the letter. The C/LOBS solves the problem of determining speaking/listening objectives better than others, e.g., poetry reading objectives. Although the principles underlying the C/LOBS are powerful, the procedures for carrying out the analysis may vary according to context. Like the IPISD, it works better when complemented with imagination and common sense.

- Successful implementation of this system depends on deliberate planning. Plans must be detailed, concrete, and include short-, medium-, and long-term timetables:

- For each planned implementation effort, a specific planned action should be linked with a particular goal.

- Each action-goal statement should be accompanied by a clear description of the situation that will exist if the action has accomplished the goal.

- User Agency decision-makers must be included in the implementation process.

- For each planned implementation step, the manager should brief high level User Agency decision-makers on the proposed change, and actively solicit their comments, feedback and suggested modifications. Make sure that the User Agency decision-makers who will be affected by the change have approved it before implementation begins.

- Remember that successful implementation takes time. Sets of long-, medium-, and short-term goals and strategies are necessary to make sure that implementation efforts stay on the right track throughout the long process and that progress points along the way can be anticipated and noted when they occur.

Strengths and weaknesses

- The C/LOBS is a fairly complex system. It is designed to be adequate to handle the military job with the most extensive language requirement. Of course, that means that it will also handle jobs with very simply-specified requirements.

- The above means that the system is most cost-effective when it's used to analyze a complex job. It may be a waste of time/dollars to proceed through every step of the system in cases where the language requirement is well-known and easily stated.

- The C/LOBS prespecifies the output of the task analysis. The structure of the interview, survey, and observation instruments ensure that certain kinds of information in certain formats will be captured and arrayed. This means that the task analyst knows exactly where s/he's headed and how to get there - that's an advantage. On the other hand, some valuable information not asked for in the data collection instruments may be missed without well-trained analysts.

- The system assumes commonalities between jobs. It divides jobs into components, and then prescribes instructional development at the component level.

In the long run, this is more cost-effective than an approach which treats each job as unique and starts from scratch every time.

- Because the task analysis methodology provides for three data collection instruments: the interview, observation, and survey, some analysts may decide to go the quick and dirty route--just mail out the survey and wait. In almost every case, this will be a mistake. Direct and personal interaction with User Agency personnel at all levels is paramount to the success of any instructional development effort.

Relations with the User Agency

- It is extremely important to develop and maintain credibility with the User Agency. The User Agency is your client, not an obstacle to progress. There are two cardinal rules for dealing with the User Agency: (1) keep them informed and (2) take their input seriously.

- Use the power structure in the User Agency to facilitate contact and cooperation. Make sure the task analyst clears his/her plans with the right people in the User Agency, briefs decision-makers, and follows up with reports of his/her progress.

- Carefully select personnel to make site visits. A site visit is not an easy task, it's a diplomatic mission. Site visit team members should be well-informed, prepared, respectful but not obsequious, and ready to conform to the needs/schedules of User Agency staff when necessary.

- Before a site visit, prepare. Take along material you've developed relevant to the MOS that shows that you've done your homework and won't be wasting their time.

- Take along products typical of this kind of project, even if they are from a different MOS or language, to show them where the analysis is headed.

Reactions to them can provide an early warning of possible conflict with User Agency ISD formats.

- Follow up survey administration and site visits with periodic contacts with the User Agency until the project is finished. Be sure to submit draft versions to the User Agency for recommendations and revisions. Don't surprise them with the final product!

Task Analysis/Course Development

- The output of the C/LOBS does not specify instructional strategies. Don't try to restrict course developers or instructors unnecessarily - let them use their creativity and common sense in devising instruction that accomplishes the objectives.

- The C/LOBS system is arranged so that the analyst can function adequately within the system without technical knowledge in esoteric fields. However, besides knowledge of general task analysis procedures, the analyst should have skills in the following areas:

- interviewing and observation strategies
 - User Agency organizational systems and how to work with them
 - decision-making from descriptive, rather than inferential, statistics

Training in these skill areas may be necessary.

A Final Recommendation

Our final recommendation is concerned with the sensitive area of performance standards. Many people confuse performance standards with criterion-referenced tests. The standard is the criterion. The test measures adequate or inadequate performance to the criterion. User Agencies are often held responsible for the determination of standards. From our experience, we have concluded that User Agencies, in the main, can better evaluate a performance standard for language than develop it from scratch. Often unfamiliar with the technical problems of

language training development and the DLIFLC in-house procedures, the User Agency can become frustrated by the magnitude of the problem of determining performance standards. Expecting a User Agency to supply performance standards sufficient for CRT development is not reasonable, at least not realistic. Therefore, we recommend that:

- *Task analysts assume the responsibility for initial determination of performance standards for TSOs.

- *Task analysts "logically" validate these standards with in-house and User Agency decision-makers and MOS holders.

CRT developers, whose activities parallel those of the task analysts, are routinely familiar with developing initial CRTs, modifying on the basis of MOS-holder feedback, coordinating with course development and faculty, conducting student trials, and job performance follow-up. Essentially, we advocate that the same approach to performance standards be taken by task analysts.

Although language training to some acceptable criterion is not new, the rigor and precision required of the ISD approach to language learning is most recent. Excessive overtraining, as an insurance policy against inadequate analysis, is as unacceptable as undertraining to meet mission requirements. Task analysts must be the moving force behind the design, development, and validation of performance standards.

SELECTED BIBLIOGRAPHY

- Allen, Patrick. Structural and functional models in language teaching, TESL Talk, January 1977, 5-15.
- Babbie, Earl R. Survey research methods. Belmont, Cal.: Wadsworth Co., 1973.
- Backstrom, C. H. and Hursh, G. D. Survey research. Northwestern University Press, 1963.
- Baer, E. R. (Ed.). Teaching languages: Ideas and guidance for teachers working with adults. London: British Broadcasting Corp., 1976.
- Carroll, J. B. The psychology of language testing. In A. Davies (Ed.) Language testing symposium. London: Oxford University Press, 1968.
- Davies, A. (Ed.). Language testing symposium. London: Oxford University Press, 1968, pp. 1-17.
- Davis, R. H., Alexander, L. T., and Yelon, S. L. Learning system design. New York: McGraw-Hill, 1974.
- Disick, R. S. Individualizing language instruction: Strategies and methods. New York: Harcourt Brace, 1975.
- Emmans, K., Hawkins, E., and Westoby, A. Foreign languages in industry/commerce. University of York: Language Teaching Centre, 1974.
- George, H. V. Common errors in language learning: Insights from English. Rowley, Mass.: Newbury House, 1972.
- Gerlach, V. S., et al. Algorithms in learning, teaching, and instructional design. Arizona State University, Dec., 1975. (ERIC Document Reproduction Service No. ED 116 658.)
- Gestrelus, Kurt. Job analysis and determination of training needs. Sweden: University of Lund, 1972.
- Gronlund, N. E. Preparing criterion-referenced tests for classroom instruction. New York: Macmillan, 1973.
- How to prepare and conduct military training FM 21-6. Department of the Army, November, 1975.
- Interservice procedures for instructional systems development. TRADOC Pamphlet 350-30. (five units).

Keefe, Eugene K., et al. Area handbook for the Soviet Union. Washington, D. C.: U. S. Government Printing Office, 1971.

Keefe, Eugene K., et al. Area handbook for Spain. Washington, D. C.: U. S. Government Printing Office, 1971.

Kress, G. (Ed). Halliday: System and function in language. Oxford: Oxford University Press, 1976.

Mager, R. F. Preparing instructional objectives. Palo Alto, Cal.: Fearon, 1962.

Melching, W. H. and Borchers, S. D. Procedures for constructing and using task inventories. Columbus: Ohio State University, 1973.

Ornstein, J., Ewton, R. W., Jr., and Mueller, T. H. Programmed instruction and educational technology in the language teaching field. Philadelphia: Center for Curriculum Development, 1977.

Systems development in adult language learning. Strasbourg: Council of Europe 1973.

Systems development in adult language learning: The threshold level, Strasbourg: Council of Europe, 1975.

Systems development in adult language learning: Waystage, Strasbourg: Council of Europe, 1977.

Vallette, R. and Disick, R. Modern language performance objectives and individualization: A handbook. Harcourt, Brace, Jovanovich, Inc. New York, 1972.

Whitaker, D. P. and Shinn, R., et al. Area handbook for the People's Republic of China. Washington: U. S. Government Printing Office, 1972.

E-62 APPENDIX A: INITIAL LISTING OF DESCRIPTORS OF COMMUNICATIVE ACTIVITIES

<u>COMMUNICATIVE ACTIVITIES</u>	<u>COMMUNICATIVE TASK IDENTITY NUMBER</u>	<u>REQUIRED LANGUAGE SKILLS</u>	<u>DEFINITION</u>
1. Briefs	S.3	speaks	Gives final instructions to; provides information in a capsule form through speech. There is a requirement for specificity and a mild sense of urgency.
2. Converses	C.1	speaks/listens	Talks, interchanges thoughts, information, and opinions through speech.
3. Corresponds	W.1	writes	Writes letters and official notifications expecting or soliciting a response.
4. Demonstrates	C.7	speaks/(listens)	In an instructional environment, labels parts or components and shows how to operate, maintain, disassemble, or reassemble a piece of equipment, or the like.
5. Informs	S.2	speaks	Provides a desired body of information to others through speech; relays messages, data, and information.
6. Facilitates	C.6	speaks/listens	Summarizes and translates verbally oral communications for person(s) who are not knowledgeable in the language being spoken.
7. Gists	R.3	reads/writes	Provides written summaries in English of documents written in a foreign language.
8. Interprets	C.5	speaks/listens	Translates and facilitates communication through speech between two or more persons of differing language backgrounds.
9. Interrogates	C.4	speaks/listens	Questions others in their native language for the purpose of extracting data, information, and opinion in a structured environment.
10. Interviews	C.3	speaks/listens	Gathers information through speech for the purpose of forming opinion, making assessments or judgments on subsequent decisions. This environment is less structured and hostile than that of interrogation.

11. Lectures	S.4	speaks	Formally presents information through speech for the purpose of instruction or providing detailed and organized information.
12. Monitors	L.1	listens	Comprehends and mentally summarizes the main points of verbally transmitted information and data. One can monitor broadcasts, speeches, conversations of others, etc.
13. Narrates	S.1	speaks/reads	Reads aloud from a script or document in the language of the printed material.
14. Notes	L.2	listens/writes	Writes immediate summaries of information and highlights of an oral discourse.
15. Prepares memoranda	W.3	writes	Writes memos, notes, and official notices in the target language.
16. Prepares reports	W.2	writes	Writes more lengthy and formal material for specific consumers who are non-English speakers.
17. Reviews	R.1	reads	Reads official documents or articles for the purpose of examining their contents with respect to some predetermined criteria or expanded informational need.
18. Scans	R.2	reads	Quickly peruses written information, newspapers, articles to search for specific kinds of predetermined information.
19. Takes dictation	L.3	listens/writes	Writes down oral discourse intended to be copied.
20. Teaches	C.8	speaks/listens	In an instructional environment, uses the language more extensively to communicate ideas or concepts; can listen to and understand effectively the questions asked by students.
21. Telephones	C.2	listens/speaks	Talks on the telephone with native speakers for the purpose of exchanging information and the like.

22. Transcribes	L.4	listens/writes	Writes or types oral verbatim discourse. Such communication may come from records or any device that permits the transcriber to listen repeatedly to the verbal utterances.
23. Translates	T.0	reads/writes	Provides a word-for-word or technically accurate transfer of information from one language into another.
24. Digests	R.4	reads/writes	Reads documents, articles, or transcripts for the purpose of rendering key phrases, sentences, information, or thought into another language.
25. Extracts	L.5	listens/(writes)	Listens to broadcasts, speeches, or conversations for the purpose of rendering key phrases, sentences, information, or thought into another language.